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CASES OCCURRING IN PRACTICE.—1884.

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ALTHOUGH accused of reporting every case occurring in my practice, and although my treatment seems to be unsatisfactory in the eyes of some members of the profession, I venture to send you the following cases, which I have intentionally confined to obstetrical work, as a slight reminder that it can scarcely be a record of *all* the work I have done since the year began.

1. *Extensive Rupture of the Perineum in a Heifer.*—This accident occurred during the extraction of a full-grown, dead fœtus. I was sent for, but being from home, the calving was accomplished before my arrival. The rent between anus and vagina was complete, and greatly extensive, so that at each defæcation the fæces passed out at the vulva instead of the anus. I ordered the injured parts to be kept thoroughly clean, being dressed twice daily; and about three weeks after parturition, when all discharges had ceased, I had the quey properly secured and operated as follows:—Having scraped all the edges in the extensive rent till fresh blood came freely, I introduced along the entire course of the rupture, several stitches of carbolised black silk; I found this very difficult to do as regards the floor of the rectum and roof of the vagina. I did, however, manage to accomplish it; and I am happy to say that adhesion

took place immediately, and complete recovery is the result, the heifer having now as good a perineum as ever she had.

Prior to operating, the quey was kept short of food, and immediately before commencing I washed the rectum thoroughly out with enemata.

I have at present two similar cases, in newly-calved heifers, waiting cessation of *post-partum* discharges before being operated on as above.

2. *Urethro-Vaginal Rupture in a Young Cow.*—This accident also happened during parturition ; extraction of the fœtus being extremely difficult, requiring several men and ropes before accomplishment. Fœtus alive, however, but mother much injured inside vagina.

About a week after delivery I was consulted, as the cow had a great many pains, difficulty in passing urine, and was off her food. On examination, I found a rent in the urethra, about an inch behind the *meatus*—that is, an inch farther along the vaginal floor than the *meatus ;* the edges of this rent were swollen and everted, and, owing to inflammatory swelling (from other injuries), all round the vagina, including meatus, I had no doubt the urine escaped through this abnormal opening, being expelled in a very small jet.

The rent was too far in to think of stitching it in any shape, so I adopted the following treatment, namely, sponged the whole of the vaginal canal thoroughly out with carbolised warm water and 10 p.c. carbolic soap ; dressed the lips of the wound or rent, and then applied an emollient, consisting of vaseline, zinc ointment, and a little carbolic acid. I continued this treatment daily for a week with the happiest results, the rent gradually closing up, and other parts of the vaginal canal healing with little difficulty.

A complete recovery was effected in this case ; and the cow, a handsome, pure-bred poll, is now in America—having crossed the ocean since her treatment and convalescence.

3. *Post-partum Hæmorrhage in a Heifer.*—I was called rather suddenly one forenoon to this quey, as "she was in calving" ; but on arriving at the farm, I found I was almost too late, as the fore-legs and muzzle of the fœtus were all protruding from the

vulva, with ropes on the legs. Seeing the position to be all right, I ordered immediate traction, and a dead fœtus came away with comparatively little trouble.

Delivery was immediately followed by most alarming arterial hæmorrhage, the blood escaping unremittingly in a large stream. I lost no time in injecting a large pailful of cold water into uterus, which somewhat stayed the hæmorrhage; but on the quey assuming the recumbent position, the arterial blood was expelled in large clots, showing that it had not actually ceased, but merely been clotting inside. I injected another pailful of cold water, but still the hæmorrhage went on, and now began to tell severely on the poor patient; breathing became most laborious, heaving at flanks, tremblings all over, cold extremities, ears hanging down, staggering gait, and finally she went down after a few vain attempts to remain standing. The blood again flowed rather freely, and as death was likely to take place very soon, we were just about to send a messenger for a butcher (as the animal was prime fat), when all at once I recollected that I had a phial of "Injectio Morphiæ Hypodermica" in my pocket, from which I immediately injected a quantity containing six grains of morphia. The effect was almost instantaneous; for, as the owner remarked, the injection was not over a minute completed when the hæmorrhage ceased!

This heifer, a favourite and valuable pedigreed animal, made a fine recovery, the immediate after-treatment consisting of plenty of whisky in bottles of good strong tea, and as much water as she would take.

The chief point of interest here is the successful exhibition of the "Injectio Morphiæ Hypodermica."

4. *Anal Atresia in a Calf.*—I was consulted in reference to this case of imperforate anus, and on examination of the little creature, found it a clear case of Atresia. There was nothing but a very slight indentation to mark where the anal opening ought to have been. On tickling this indentation, however, I noticed that well-marked contractions took place, thus proving that the *sphincter* was in existence. Being a bull-calf, I was debarred from making any contiguous internal explorations.

I resolved, however, to operate, and did so by cutting through

the indentation, and introducing sounds of various sizes. It was of no use, however, for I could find no trace of a rectum. As the calf was in good condition, I advised the owner to have it slaughtered. This was done, and a *post-mortem* examination revealed six inches of a small, hard, fibrous cord extending between the natural gut (which ended in a sort of blind pouch) and the imperforate anus.

5. *Prolapsus Recti in a Young Calf.*—This was the most extensive prolapsus of rectum which I have ever witnessed in so young a creature. It occurred after, or rather during a severe Diarrhœa, and when I first saw it, it presented the appearance of a large, red, fleshy tumour, six inches long by nine inches in circumference, torn and bloody, and partially putrid, with a most abominable smell. Severe and almost continual tenesmus existed, and every now and again thin fæcal matter escaped from the centre of the mass. The calf had been ill, off and on, for nearly a week, and now treatment of any sort seemed hopeless.

I resolved, however, to attempt reduction, and as a preliminary I injected three grains of Mur. Morphiæ subcutaneously, and having got a pailful of pretty warm water, with a good handful of carbonate of soda and half an ounce of carbolic acid dissolved therein, I bathed the large protrusion for fully twenty minutes. I then soaked it thoroughly with a strong solution of alum, and finally, with great difficulty, successfully reduced the prolapsus. I now introduced into the rectum as much as possible of the following softening, healing, and antiseptic application, namely, equal parts of zinc ointment and vaseline, with a slight dash of carbolic acid. Having done this, I inserted a large pin-suture right across (without touching) the anal opening, through the common integument on each side, and two small pin-sutures, one above and one below the large suture, through the superior and inferior part of the abnormally-distended natural opening.

The diarrhœa continuing, defæcation took place easily, notwithstanding the presence of the three sutures. The inferior small suture was removed on the fifth day, the superior about the tenth day, and the large one about a fortnight after insertion; and at the present time, three weeks after the operation, no return of the prolapsus has taken place.

6. *A Sick Sow.*—This was a rather valuable animal, which had, within thirty-six hours of my being called, brought forth fifteen youngsters; the first *seven* were alive, but the next *three* were dead, and covered with dark-coloured blood, while the remaining *five* (like the first seven) were brought forth alive and well. The dozen were all alive and quite active during my visit, and ultimately all did well. The sow, however, was very sickly; could scarcely stand; the digestive and urinary systems both dormant; externally, cold all over; internally, temperature high, and no milk at teats. My diagnosis was Puerperal Fever, and prognosis favourable *if my untoward patient could be got well physicked and stimulated.*

Being informed that the sow would voluntarily take nothing but milk, but *that* to any extent, I resolved to administer a heavy dose of sulphur and linseed oil in a Scotch pint of good milk. This the sow at once greedily consumed, and about an hour after she got a quart of stout and a glass of whisky in a like quantity of milk. The latter dose was repeated in the morning, and again next night, after which the bowels responded pretty freely to the sulphur and oil. The milk returned to the teats, and my patient rapidly became convalescent.

When I first arrived at this case, an empiric was just about to give the poor brute thirty drops of croton oil, which would, no doubt, soon have settled all her trouble! I pitched the Ol. croton tig. into the fire, and treated as above.

7. *Abdominal Hysterotomy in a Cow.*—I was called early one morning to a cow which was said to be "bleeding to death." On my arrival at the farm, I found a profuse discharge of arterial blood from both nostrils at every expiration, and from the appearance of the forestall, I judged that this escape of blood had been going on for a considerable time, so that the cow now appeared to be *in extremis*, and the slightest movement seemed to increase the flow of the vital fluid. It was evidently a severe case of Hæmoptysis, and my prognosis was anything but favourable.

This cow was not only pregnant, but actually "past her time of calving," and the fœtus seemed to be continually on the move, kicking about in every direction; and, as the idea of checking the flow of blood seemed to be out of the question, it

struck me that, as the cow was in good condition, the best way was to *save the calf*, and utilise the cow's carcase. I therefore lost no time in procuring the services of a good butcher, and having thrown and secured the cow, her abdomen was cut open in the mesian line, the uterus and contents instantly extracted at the artificial opening, and the fœtus (relieved of all its "envelopes"), was found to be quite lively, and ultimately did well. The carcase of the cow was immediately dressed, and made very fair butcher's meat.

The owner was not only delighted at this novel way of delivery, but also at receiving almost full value for his cow.

The only other remark necessary in this case is as to the active movements of the *fœtus in utero* immediately prior to its abnormal extraction. I have always observed that, when the maternal life is ebbing fast, the living, undelivered fœtus becomes exceedingly frisky, and kicks about in all directions, and I have often thought that this was owing to the withdrawal of the life-carrying current from the parent system, because in all cases where life is taken by the forcible extraction of blood, these kicking movements always occur.

8. *Abdominal Hysterotomy in a Cow.*—This, although a similar, was a far more interesting case than that above related, and occurred a few days ago in a pure-pedigreed four-year-old cow.

About six weeks since I was consulted in reference to this patient, as she was always vomiting her food, and getting enormously distended about the rumen, and would or could neither eat nor chew her cud. On examination of the cow, I considered it necessary to introduce the common œsophageal probang, and in doing so discovered that an obstruction of some sort existed about the abdominal end of the œsophagus, or, as nearly as I could guess, about its diaphragmatic portion. I had to withdraw and reintroduce the probang several times before overcoming or getting past this obstruction, and between each attempt I administered a small quantity of Ol. lini., to lubricate the parts, and soften the foreign body, if any was present.

Before introducing the probang, I evacuated the over-distended rumen with a Gunn's horse trocar and canular; this lessened the danger of injury from the forcible introduction of the pro-

bang. I may mention that this cow had been both probanged and probed more than once before I saw her, but only with temporary benefit. I told the owner that it was not a case of common obstruction of the gullet, but that it was likely to be either a constriction (from disease) of the canal, or something abnormal (tumour or otherwise), which occasionally rolled on to or pressed upon the gullet at or near the diaphragm. Prognosis was consequently doubtful. I ordered emollients and antiseptics, and the occasional passing down a sponge soaked in the same.

The chief point in this case, however, was that the cow was within six weeks of her "time of calving," and the owner was most anxious to carry her on till that auspicious event took place, as she was an animal of pure and fashionable breed. To make a long story short, after a great many probings, and ropings, and spongings, and unlimited quantities of stout, and all kinds of gruel, her "time" arrived on the 6th of March current, and on the evening of the 8th she became very uneasy, and had slight *pains;* so I was called on the 9th, and found my patient as stated.

I explored *per vagina*, but found the os uteri very little relaxed, scarcely admitting one finger; so I had recourse to stimulants and hypodermic injections of Liquor ergotæ ammoniatus. These were continued throughout the day, but although this excellent preparation of ergot brought on very severe pains, the os uteri remained obdurate, and scarcely relaxed to any perceptible degree. Fearing collapse of my patient (she had not tasted anything solid for more than a week, and was continually vomiting fluids such as gruel, etc.), I resolved, after discovery *per rectum* that the fœtus was alive, to accomplish delivery by abdominal hysterotomy.

Having procured the assistance of a butcher, I followed the same routine as in the foregoing case, and safely secured a living calf, which, I am glad to say, is at present quite lively, and being suckled by another cow which calved the same day, there being no less than five calvings at this farm in one day, four naturally, and one by abdominal hysterotomy!

Post-mortem examination revealed extensive tubercular deposits in the abdominal cavity. The tubercles varied in size

from a mustard-seed to a goose egg, and were found in all directions. The liver was most enormously enlarged—three times the natural size, and hundreds of tubercles, of all shapes and sizes, were observed on its surface, and in its parenchyma. Two large masses of hardened tubercular matter were attached to the œsophagus close to the stomachs, and in front of them there was a dilatation of the œsophageal wall *to one side*, about six inches long and three inches deep. This dilatation was hard packed with chewed food. My idea is that the pressure of the two tubercular masses on the œsophagus caused the primary obstruction, and that the probang, in being too forcibly used, had partially ruptured the œsophageal wall in front of this obstruction, which partial rupture must have been the beginning or origin of the abnormal pouch, which was found on the *post-mortem* examination.

There is one thing in regard to these cases in which we wish merely to save the life of a valuable fœtus by abdominal hysterotomy, and that is, we ought never either to stun the mother by a blow, or administer a heavy dose of "Injectio Morphiæ Hypodermica," as by either of these we run the almost certain risk of the fœtus dying during extraction, or immediately thereafter.

INFLUENZA.*

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FOR many centuries veterinary and other authors have noted the occurrence, at various periods, of an epizoötic affection attacking almost every species of animals, birds, and even man himself. This disorder, as noticed by these writers, was marked by certain well-defined general symptoms, which admitted of its being easily distinguished from other diseases, and being assigned a place for itself. The disease has received a multitude of names, some referring to the supposed pathology of the disorder, and some to the symptoms as noticed by the observer. Among the various names applied are the following—Distemper, Epidemic

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Catarrh, Catarrhal Fever, etc. In France it is named "*Courbature*," "*La Grippe*," etc. In most countries it bears the appellation of "Influenza," a name given it by the old Italian writers in the seventeenth century, and which referred to some supposed stellar influence as regarded the production or origin of the disease.

Influenza has a history which extends far back into the days of the ancients. Hippocrates, a Greek physician, who lived about four hundred years before Christ, and who has been styled the "father of medicine," mentions the disease as attacking the human race; and it is fair to presume that it also affected the lower animals at that period. It is mentioned as having occurred in Seville in the year 1299, raging with great fatality, and causing the death of more than a thousand horses; in 1648 it attacked the horses of the French army in Germany. Forty years later, it prevailed over the whole of Europe, attacking both men and horses; and in 1699 this continent was visited by the scourge for the first time, since which time its recurrence has been noted at varying periods, and in different degrees of intensity, as well as in different forms.

Gibson, an old English author of repute, in a work published in 1750, describes a disease which he denominates a pestilential disease or "Epidemic Distemper," which frequently prevailed to a great extent in England, entailing great loss, and even ruin in some cases to the farmers. This disease, from the symptoms presented, must have been Influenza. It was noticed in London during the autumn months of 1732, and made its appearance in several other parts of the kingdom about the same time. It commenced in some places in the country near London in September, entering the city during the following month, and progressing so swiftly that in a week there was scarcely a stable to be found in the whole city without the infection. Its duration was from two weeks to a month. During the spring of 1734 it again visited England, presenting the same general symptoms as the epizoötic of two years before, but in addition showing symptoms of derangement of the urinary apparatus, and inflammation of the lungs as complications, and this form was, of course, attended with greater fatality than that of 1732.

The disease is very erratic in its movements, proceeding from north to south, and from east to west, as well as in the opposite directions; but there seems to be a tendency to proceed from the east to the west more than in any other direction.

In the epizoötic form it is remarkable for its extensive and rapid diffusion, extending within a brief period over different and widely-separated expanses of territory. In its course it bears a strong resemblance to the march of that terrible scourge of the human race, Epidemic Cholera. It quickly spreads from one locality to another, and even from one country to other countries far distant, neither rivers nor oceans appearing to interfere in the slightest degree with its progress.

During its prevalence it attacks vast numbers of horses of all ages and both sexes, entailing incalculable loss to owners of stock, and causing great annoyance and serious detriment to commercial interests in every branch, as it not unfrequently happens that seventy-five per cent. or more of the horses of an infected locality are prostrated, and, as a consequence, business is seriously interfered with, and in some cases almost wholly suspended. Particularly well was this exemplified during the epizoötic of 1872, during which it was almost an impossibility to procure horses for even the lightest description of work. Very little hauling was done, and that little was accomplished with the aid of oxen; and while it was no uncommon sight to see an ox doing duty between the shafts of a dray, or a couple of oxen drawing a waggon, it was very rare indeed that a horse was seen working, even on the streets of some of our largest cities.

Some animals appear to be much less susceptible to the morbid influence than others, and some seem to be altogether insusceptible; though such cases are extremely rare, and we have absolutely no means by which we can account for this discrepancy. Generally speaking, all breeds are equally liable to an attack, but on close observation I think it will be found that the coarse, heavy breeds of horses, as well as suffering more when attacked, are slightly more susceptible to the influence of this disease—as indeed they are to most other diseases—than the lighter and more finely-bred horses, and young horses are noticed to be more prone to an attack than older horses.

Horses of a medium age, from seven to ten years old, enjoy a greater immunity from this affection than the young or very old, and especially so if they are vigorous, of strong constitutions, receive a proper amount of exercise, are properly fed, etc. The reason why this should be so is apparent, as such animals are in perfect health and vigour, are fully developed, and, in a word, are in the prime of life, and consequently offer a much greater resistance to the introduction of the morbific influence into the system, than would be offered by a badly-developed, weakly, or aged animal, or an animal in an unthrifty state from any cause whatever. A debilitated or abnormal condition of any one or more organs of the animal economy especially invite, or predispose to, an attack of Influenza; and according to the parts affected do we have various symptoms presented.

Influenza is not now attended with as great fatality as it was some years ago, and in the absence of complications cannot be considered as a very fatal disease, the fatality being limited chiefly to old and worn-out animals, and those of feeble constitutions. The disease, in its simple form, is generally of a mild character, but it frequently leads to the development of other and more severe affections, and in this way often proves fatal. It has been observed that when Influenza prevails other disorders are, as a rule, unusually severe, and the percentage of mortality from all diseases is greater than usual. For instance, it may be readily understood that were Influenza to prevail to any great extent in a locality already tainted with any low form of disease, that the death-rate would be enormously increased. A proof of this, I think, is the fact that Influenza was considered to be a very fatal disease some years ago, when proper drainage and other sanitary measures were not attended to, as they are at the present time, but the above is only one of several reasons why the disease is not now considered to be of as formidable a nature as formerly. Among these reasons may be mentioned the following:—

First, sanitary improvements. Second, that the disease now-a-days very rarely, if ever, assumes the malignant type which characterised it in former years, but has changed its nature, in consequence of the various modes of treatment that have been

practised. Third, the profession of to-day better understand the treatment of disease in its various forms, than did the older practitioners of fifty or a hundred years ago, simply from the fact that we have profited by their experience, and at the same time have been making rapid advancement in the acquisition of knowledge pertaining to disease, and the treatment thereof, for, comparatively unknown as it may be, it is nevertheless an undeniable fact that during the last few years the veterinary profession has made very rapid and upward progress, and so significant is the advancement made, both as regards scientific and national importance, that its parallel cannot be shown, even in the annals of the sister profession.

Its antiquity; the ever-varying phases in which it has manifested itself; its intractability to treatment, showing a most obstinate persistence in running a certain course; its tendency to complications, etc., all combine to render Influenza one of the most remarkable as well as interesting diseases with which we have to deal, its peculiarities meriting much greater notice than has been accorded to the disease. Still, this subject has received a great deal of attention from veterinarians, and others who have made the diseases of the brute creation a special study from the earliest ages up to the present day, and while they have succeeded from time to time in making many valuable discoveries as to its nature, and effecting numerous reforms regarding the treatment of the disease, they have as yet been wholly unsuccessful in their endeavours to elucidate and clear away the cloud of mystery involving its origin. Many ingenious theories have been advanced from time to time in the efforts to locate the primary cause of the disease with a degree of certainty that would place its origin beyond the question of a reasonable doubt; but it is needless to say that these efforts have been in every instance unavailing, for as soon as one authority advanced a theory apparently accounting for its development, he would be answered by an equally eminent authority, who would direct his efforts to controverting and denying *in toto* the conclusions reached, and who would adduce powerful arguments in support of his denial, and then having accomplished his purpose would proceed to form a theory of his own to give to the world,

which would, in its turn, be obliged to pass through the scathing fire of criticism, and, unable to stand the ordeal, emerge, henceforth to be regarded as a fallacy. The most eminent authorities on both human and veterinary diseases, through all ages and in all parts of the world, have disagreed and been divided in their opinions on this subject; what a hopeless task, then, would it be for me, with my limited experience, to attempt to lift the veil of obscurity, under which the origin of this disease is hidden, when the ablest investigators the world has ever seen, both in the past and present, have failed to do so. We know that Influenza, like every other disease, must have an origin, or it would not exist, but beyond this point all is conjecture. I will now proceed to direct your attention to a few of the theories held regarding the primary cause or origin of Influenza. It has been attributed to exhalations from the earth, but that this cannot be the cause is evident from the fact that it has frequently manifested itself in the midst of the ocean, where such exhalations would not be likely to reach.

Currents of electricity in the air have by some been supposed to exert some peculiar and occult influence by means of which Influenza could be originated, but as no such condition has ever been shown to exist in the air in connection with the disorder, this idea is, to say the least, a very vague and unsatisfactory one, with absolutely no argument to support it, and, therefore, is unworthy of notice and needs no refutation.

It has also been supposed to arise from an excess of ozone in the air, and while ozone will cause considerable irritation to the Schneiderian and other mucous membranes which are more directly exposed to the action of the air, still, common-sense teaches us that it could not set up the great constitutional disturbance by which Influenza is characterised.

Some say that it is nothing more than common cold, beginning as colds ordinarily do, and proceeding to that high degree of catarrhal inflammation known as Influenza; that this is not true is shown by the fact that simple catarrh can be cut short almost at will, while Influenza persists in running a definite course in spite of every mode of treatment that can be brought to bear; and any attempt to cut it short is fraught with great danger to

the life of the patient. Still, others, wishing to be more conservative, have included all of the above theories, and taken the broader stand that the disorder is primarily caused by atmospheric influences; and remarkable atmospheric changes and variations of temperature have been recorded by various writers during epidemics of Influenza, who have thus endeavoured to account for the presence of the disease; but while these conditions may and very likely do bring about a predisposition to the malady, the stand taken that they are the actual causes of Influenza is not to my mind a tenable one, for many outbreaks have occurred without anything remarkable being observed, so far as temperature and atmospheric changes were concerned; again, most extraordinary changes of weather and temperature have frequently been observed without a solitary case of Influenza occurring as a consequence.

Those minute organisms known as animalculæ have come in for their share of consideration, being firmly believed by many to be the cause of this as of some other diseases; this is a very interesting theory, and one well worthy of consideration, and by it certain of the symptoms can be accounted for which hitherto could not be explained. Some observers consider the disease to be due to microscopic vegetable organisms, or Cryptogama; this is the opinion entertained by Mr. Moorhouse, of New York, who, on examination of the discharge from the nostrils, found three distinct species of vegetable organisms, all of them in a vigorous state of development. According to the *Veteriuarian*, the observations of Mr. Moorhouse do not accord with those of Professor James Law, who subjected the particles floating in the air from stables and fields to microscopic examination, both before and during the prevalence of the epizootic of 1872, without discovering any important difference in the floating particles from first to last.

This brings us to the much-mooted question of contagion and infection. Most writers use these terms indiscriminately, making no distinction whatever between them; still, I consider them as two different words, each with a different meaning to the other. For instance, a contagious disease may be defined as follows:—A morbid condition of the animal economy induced by the opera-

tion of a specific poison, termed a virus or contagium, which, on being conveyed by actual contact into the system of a healthy animal, induces a condition identical with that of the body from which it originated.

An infectious disease is one which has the power of spreading itself by diffusion of the specific material through the air.

I am well aware that many eminent authorities do not believe Influenza to be either contagious or infectious, and I cannot help experiencing a feeling of great diffidence on expressing views antagonistic to the views held by those learned men; yet were I to do otherwise I would not do justice to myself, and consequently I must array myself on the side of those who believe that Influenza, under certain circumstances, is contagious as well as infectious, and will now endeavour to give a few reasons for so thinking, or rather for disputing the assertion made by some, that it is a non-contagious disease.

We are told that it has attacked crews of ships in the midst of the ocean, and, therefore, cannot be contagious; but might not the germs of the disease have been lurking in their systems from the time they left the port, only to become developed and produce the disease while on the voyage? This is reasonable, and, I think, does away with one argument in favour of the non-contagious character of Influenza.

Mr. Greene, M.R.C.V.S., St. John's, N.B., records the following, which Professor Williams designates as "an important fact." Mr. Greene says:—"I was always under the impression that Influenza was both contagious and infectious till the late outbreak; since then I have altered my views with regard to the contagion and infection of that disease. One among several facts which I could mention will bear me out in this question. During the month of July, 1872, a horse had been put to grass on Partridge Island in the Bay of Fundy. This island is distant from this city three miles. No other horse had been near the island from the date of his landing up to the time of the outbreak in St. John's, N.B, and on the 15th or 16th of October, which was only two or three days after the first case was reported in this city, the horse on the island was affected with the most violent form of the epizoötic." (See Williams's "Med.," page 329.) Now, with

all due deference to Professor Williams, I do not consider the above to be an "important fact," neither do I consider the observation of Mr. Greene to be fraught with importance of the slightest magnitude, so far as proving the disease to be non-contagious or non-infectious is concerned. On the contrary, I consider that if it proves anything that it will be found to be evidence rather in favour of, than against the, contagious and infectious theories; for although no other horse had been near the island from the date of the arrival of the horse in question, still the infection would be able to reach the island in many ways. Might not it have been conveyed to the island by birds? or by the owner or attendant of the animal, whom it is to be presumed would visit the animal occasionally? or may not the poison have been present in the animal's system even before being taken to the island? Again, horses and cattle are very frequently pastured together; there may have been a number of cattle, sheep, or other animals on this island, that were removed there from an infected district; the horse may have acquired the disease from them. Yet even supposing that none of the above causes operated to convey the disease to the horse—supposing that no other animals were pastured there, that no man, bird, or other living thing visited the island during all this time, and that the horse was free from taint of any disease at the time of leaving St. John's—I say even supposing all the above to be the case, is the fact that the animal contracted the disease under these apparently unfavourable circumstances for its development, sufficient evidence to cause any man who cares to look beneath the surface to change his belief, for disbelief, in the contagion and infection of Influenza? I think not; for microscopic particles of the contagious principle or virus might yet find their way to the island through the media of the air, and being taken into the air-passages of the horse, in due course produce their peculiar effects. The *Veterinarian* puts the question, "Would not the morbific matter have become diluted to such an extent (after travelling three miles) as to be inert? To this I would answer, that undoubtedly contagion existing in certain forms, as a gas for instance, would become dissipated, and rendered inert by the action of the air; but it has not as yet been decided in what form the conta-

gium exists, and if it is a living organism, as many suppose it to be, it would have to pass through a definite course of existence, however brief that might be, and exposure to the atmosphere at any ordinary temperature would not be at all likely to affect its virulence, even in the slightest degree, and if it is small granular masses of organic matter, as it is now asserted to be, I most certainly cannot see any reason why such particles, being of microscopic proportions, may not be taken up and carried by the air a much greater distance than would be necessary to reach the horse in question from St. John's, and that, too, without undergoing any destructive process, such as would interfere with its activity. Professor Williams, after alluding to contagion and infection as embodied in the theory of Beale, says, "This hypothesis is strongly corroborated by the fact that Influenza is sometimes conveyed to a healthy locality by horses affected by, or recovering from it." Williams continues, "It is, however, negatived by its being incapable of propagation by inoculation from one horse to another; or by transfusion of blood from a diseased to a healthy horse, by its undoubted spontaneous appearance in localities in which contagion is entirely out of the question; and by its occasional occurrence when Influenza prevails in man, dogs, cats, and even birds."

Now, it must be admitted that the disease has not (at least to my knowledge) been produced by direct inoculation, and most writers deny that it can be so produced, but none of them tell us how they conducted their experiments, and I think very few experiments in this direction have been made; but I presume that the virus has been introduced into the areolar tissue under the skin. This may not be the proper way to inoculate to produce the disease; it is possible that some one or more of the fluids, etc., with which the virus would thus come into contact may exert a chemical effect upon it, and thus destroy its powers of propagation; or it may be that it is necessary for the virus to come into contact with some of the secretions of the Schneiderian membrane, combining with those secretions chemically or otherwise, before it is enabled to propagate the disease. This problem is, I think, one well worthy of earnest consideration, the more so as it is one that can be easily solved by putting the

matter to a practical test on the next appearance of Influenza in the epizootic form. Again, even though it is communicable by means of inoculation into the connective tissue, it might miss fifty times, and yet this would not be proof sufficient to show that it could not be thus communicated. In illustration of this, I will mention the fact, that in the Veterinary School at Alfort, they repeatedly caused a dog to be bitten by rabid animals (over seventy times, I think), yet the animal bitten escaped the malady. It is also recorded, that in the case of an ass that was inoculated with the virus of Glanders, at various periods extending over a year, and confined with glandered horses during the whole time, that he failed to contract the disease. Yet, who among us has the hardihood to assert that Glanders and Rabies are non-contagious diseases? It is a well-known fact that the virus taken from the fangs of some of the most deadly serpents can be taken into the stomach with impunity, where it is neutralised, while the smallest quantity introduced into the blood will give rise to the most violent symptoms. Now, if there exists in the gastric secretions some principle by which this poison is neutralised, why may there not similarly exist in the blood a principle to render inert the virus of Influenza?

It is beyond dispute that Tuberculosis has been produced time and again by inoculation; yet how often has inoculation in this case been followed by negative results! and the same may be said of almost every other contagious disease. As to the fact mentioned by Williams, that transfusion of blood from a diseased to a healthy animal failed to produce Influenza, I must confess my inability to understand what such an experiment proves, and have no great hesitation in asserting that it proves absolutely nothing. In support of my assertion I will cite the following experiment performed by M. Paul Bert, a well-known French scientist. He caused the entire blood of a dog in a state of furious Rabies to be transfused into a healthy animal, and found that the latter, kept under observation for a year, manifested no symptoms of the disease. And as to the spontaneous appearance of Influenza in localities where contagion was out of the question, I would merely state that such reasoning appears to me to be the veriest sophistry, for it is well known that Glanders in the horse

and Rabies in the dog sometimes occur spontaneously also, and that in localities where contagion is out of the question, yet no one doubts the existence of a contagious principle in either of these diseases. I think that I have conclusively shown, and that you will agree with me, that the occasional spontaneous occurrence of Influenza is not to be taken as a proof that the disease is of a non-contagious character.

(*To be continued.*)

CATTLE DISEASE IN THE MADRAS PRESIDENCY.

BY J. MILLS, M.R.C.V.S., ARMY VETERINARY DEPARTMENT, INSPECTOR OF CATTLE DISEASES, MADRAS.

IN the year 1865, Government thought it desirable to appoint a veterinary surgeon to investigate an extensive outbreak of cattle disease which occurred in the Nilgiri district, and to inquire into the nature of it on the spot, and also to ascertain a suitable mode of dealing with it. The officer appointed, the late Mr. Thacker, looked upon the malady as Pleuro-pneumonia of the most virulent type; so much so, that, on the average, not more than two per cent. of those attacked recovered; and by which visitation it was said that large cattle-owners among the Todas and Badaghars (natives of the hills) were reduced from comparative wealth to absolute poverty. But, subsequently, Mr. Thacker came to the conclusion that his former diagnosis was wrong, and he looked upon this outbreak to be true Rinderpest, in which opinion, after a service of two years as Inspector of Cattle Diseases, I am inclined to concur, as this malady is of somewhat frequent occurrence there. From this date, and from the good service he rendered to the Civil Government, it was considered absolutely necessary that a veterinary surgeon should be transferred from the Military Department for the purpose of investigating future outbreaks of disease. This arduous duty Mr. Thacker undertook single-handed, and without the slightest assistance whatever, which was, we need hardly add, work for many.

From the records before us, it would seem that Mr. Thacker

continued steadily at this duty until the end of 1871, and during that interval he seems to have done an enormous amount of good in every part of the Presidency; so much so, that on his relinquishing the appointment, he, we have heard it stated, was of opinion that the future services of an officer as Inspector of Cattle Diseases were unnecessary, as he said "that the natives of the Presidency had such a firm belief in his mode of prevention, and the drugs he used, that Government could do without one."

Two years later (1873), however, a severe outbreak of Murrain, in the Chingleput district, compelled Government to seek again the aid of a professional man, and Veterinary-Surgeon Pritchard, of His Excellency the Governor's Body-guard, was detailed for this purpose. He seems to have worked on somewhat the same lines as his predecessor, but did not evidently place much faith in Thacker's medicines; for he reports, on a subsequent outbreak, that out of 1,460, the total number of cattle in the four villages of the Cuddapah district, 260 were attacked, 122 died, and thirty recovered; the remaining 108 were reported to be still sick. In the village in which it first broke out 101 cattle died. This outbreak was said to be Epizootic Aphtha, but from the high mortality, we surmise that it must have been Rinderpest. In 1875 Mr. Western was appointed Inspector of Cattle Diseases, but in 1876 was ordered to revert to the Body-guard from the Revenue Department, under which he had been employed.

From this time up to 1882, nothing was done, with the exception of an occasional employment, when required, of a veterinary surgeon, until the appointment was made a permanent one in the month of August of that year, and from that time I commenced to form the Cattle Disease Prevention Department, as sanctioned in G.O. No. 1917, 12th December, 1881. When complete it will consist of the following officers:—

Inspector of Cattle Diseases	1
Deputy-Inspector of „	1
Local Cattle Disease Inspectors	27
Total	29

The Department at the present time contains one inspector,

one deputy-inspector, and six local, and nine probationary local inspectors. The deputy-inspector is an ex-farrier-major of a Madras cavalry regiment, and was appointed on account of his knowledge of the natives and their language. He also acts as assistant to the inspector. His duties are to *continually itinerate*, to superintend the work of the local inspectors, and, when not on tour, to render practical instruction at the hospital.

The local inspectors are specially-selected graduates of the Agricultural College. These men undergo a training there of three years, after which they are appointed as probationers in the Department, and in this capacity have to serve a further term of twelve months, during which time they are under my immediate tuition, or under the surveillance of the deputy-inspector. Every month they have to pass a severe examination, both practical and theoretical, on the subjects which have been taught them.

(*a*) For this examination the total number of marks will be 100, viz., theoretical 50, and practical 50.

(*b*) At the termination of the twelve months' course, a final examination will be held, and those students who fail to qualify will be put back without promotion on the following scale. Those who pass will be promoted :—

60 per cent. and over	Promotion to the grade of Local Cattle Disease Inspector.
50 per cent., and under 60 per cent.	Put back for instruction for one month.
40 per cent., and under 50 per cent.	Put back for instruction for two months.
Under 40 per cent.	Put back for instruction for three months.

(*c*) Unsuccessful students will be told in what subjects they failed, with the view to their giving special attention to them during the interim they are so put back.

(*d*) Students who have so failed will be examined monthly, and if they do not reach the standard of 60 per cent. within three months, which will be the maximum time allowed to qualify in, their case will be referred to the Director of Agriculture for his consideration as to whether it is desirable to retain such candidates longer.

Working.

When I assumed charge of the Department, the deputy-inspector was my only subordinate, with nine probationers, who practically knew little or nothing. At this time, cattle disease in its various forms had been rife all over the Presidency for a considerable period, and from the serious losses which were taking place, the Revenue Department were determined to give this subject their fullest consideration. With the resources at my command, little, of course, could be expected of me for a time; and some idea may be formed of the work before me, when in one district alone, viz., Kistna, no less than over 21,000 attacks of Rinderpest were reported.

As I before mentioned, the deputy-inspector continually itinerates, and is ordered by telegram to proceed whenever a severe and fresh outbreak of disease takes place, and, when necessary, probationers are sent to assist him. Here the latter have every opportunity of making themselves thoroughly conversant with cattle diseases. When the mortality is excessive, the Madras Act No. II. of 1866 is brought into force, and the medicines required are sent out, made up in convenient doses, from the hospital, which is also a medical depôt.

The most severe maladies with which we have to deal are Rinderpest, Anthrax, Variola Ovina, and Epizoötic Aphtha, for particulars of which see Appendix I.

The treatment of all these diseases is attended with many difficulties, because the native, naturally, from caste and other prejudices, is exceedingly adverse to interference on our part, and would rather see his cattle die, and attribute it to the immortal "*Kismut*," than pursue a rational and scientific method of cure. To show how biassed they are, they will actually hide their animals in their own dwellings, where they live with them for days, while diseased, until the patient succumbs. Another wily trick they adopt is, to hide their cattle in pools or tanks, leaving nothing but their noses above water; and when reasoned with on these quaint proceedings, they reply, "Who am I that I should be different to my forefathers, who looked upon this as the proper treatment?"

Our mode of working is as follows:—Every district, twenty-

two in number, is supplied from the depôt with 100 doses of medicine, placed in tins hermetically sealed, for all the most prevalent diseases; also a quantity of the most useful disinfectants. This supply is permanently kept up. When an outbreak takes place, it is at once reported to this office by the nearest revenue official, giving in every case, when possible, full particulars. Medicine is sent to the affected villages from the headquarters of the Collectorate, and an inspector is dispatched immediately to deal with the disease. If the outbreak is of a severe type, Madras Act II. of 1866 is brought into force, and the inspector has to keep me fully informed of every detail. It will be observed that the Madras Cattle Disease Prevention Act gives us the power to order the destruction of animals suffering from contagious diseases; but from the fact that no compensation is allowed, and that caste prejudices have to be considered, it has been found impossible to enforce this rule: consequently we are often called upon to treat cases which we know are incurable, and for the welfare of the people should most certainly be destroyed. Hospital pounds are erected in convenient places near the affected villages, and placed under the charge of a "Pound-keeper," who receives and attends all sick animals sent there for treatment. These pounds are kept well supplied with medicines, and every sanitary precaution is taken to prevent disease being conveyed from them. The attendants are not allowed to visit the villages in the vicinity; stray animals of every kind are rigidly prohibited from coming near to or entering the pound. The carcases are buried in pits six feet deep, and covered with unslaked lime; but this mode of disposal of the dead is most objectionable. I am, however, glad to say that I have induced Government to alter the law on this point, and orders are about to be issued in which cremation is to become compulsory. This I look upon as decidedly a step in the right direction, as it must save the country from contamination, for we know that unless the burial of the carcases is carried out under strict and responsible supervision, it is sure to be done badly, or not at all. Cremation will also do away to a great extent with cattle-poisoning; for the "Chumars" and "Chucklers," who are the people who practise this

profession, more especially during outbreaks, will now be deprived of the much-coveted flesh and hide. Animals which recover, before being allowed to return to the herd, are thoroughly disinfected. Since outbreaks have been treated in this manner, it is a pleasing duty to record that the mortality has decreased, and that their duration is considerably lessened.

Statistics.

I only compiled the statistics for the seven months in which I was in charge of the Department during the last official year, but they will be sufficient to convince us of the utility of a Cattle Disease Prevention Department. The district most severely visited during that time by Cattle-Plague was Kistna, where no less than 21,486 attacks were reported, or 2·82 per cent. on the total of its cattle, 60·65 of which died. Now, if we look at the statistical return (Appendix No. 3), it will be observed that the deaths in cattle stand at 19,590, and sheep at 840. These figures represent only the cases reported to this office, but I am confident many deaths occur which we never hear anything of. At the same time, it may not be without some interest to calculate the loss in money which has taken place within the period that these statistics embrace. If we take the cattle all round at an average, say, of Rs. 10 per head, and the sheep at Rs. 1, the net loss in money has been Rs. 196,740, which is a very serious matter. Kistna alone suffered to the extent of Rs. 130,390. In Trichinopoly district, Variola Ovina for a time was somewhat severe, but its progress was promptly checked—not, however, until 60 per cent. of those attacked had died.

(*To be continued.*)

ARTIFICIAL IMPREGNATION.

BY "A DOG BREEDER."

A BITCH came into my possession some months ago, and as she was a valuable prize animal, I was exceedingly anxious to get a litter of pups from her, my dog (the male) being the last of a particular strain. But, owing to an injury in a former *coitus*, I found that copulation between them was impossible; I there-

fore, knowing that artificial impregnation was attended with successful results in the case of plants, determined to attempt it in this case.

Having therefore, without difficulty, collected a sufficient quantity of semen from the male, which I kept vivified during the ten minutes that it took to collect it, in a cup floated in a bowl of hot water, about the same temperature as the male itself, I syringed the uterus of the bitch by means of an ear syringe, on to which I had fastened a catheter. Gestation was the result, and until a week before her time was due to the first impregnation (there were three), all went well.

At this period the vulva commenced to swell to an abnormal size, and I naturally thought that parturition was nigh; but such was not the case. Instead of increasing in size, the bitch began to decrease. There were no other signs of approaching labour—no pains, no presentation, nor any appearance of uterine dropsy.

Ten days later, or three days after she was due to pup to the third impregnation, I noticed considerable restlessness in the bitch, and a desire to make a nest. Weak pains then came on, and it was only after a thirty-six hours' labour, and slight doses of ergot, that dead pups were got away from her.

The veterinary surgeon who attended her stated that the pups had been dead a fortnight or so, or that their death *in utero* was synchronous with the enlargement of the vulva.

I may state that before, and for a considerable period during pregnancy, the bitch suffered from severe Canker of the ear, intestinal worms, and a form of Eczema.

She had not much exercise, and I am afraid was too well fed.

Now I would ask, through the columns of the VETERINARY JOURNAL, 1st, Whether artificial impregnation has previously been attempted and found successful in the bitch?

2nd, Whether, if successful, it is liable, through any alteration of temperature which the semen may undergo during the process of collection, to produce weakly pups *in utero?*

3rd, Whether it might be considered that the cause of death was due to the condition of the bitch's health, or was influenced

by the artificial process which caused the pups to be called into existence?

[Artificial fecundation was first practised by the Abbé Spallanzani, who, in 1780, successfully operated on a bitch; in sixty-two days the animal brought forth three puppies—two males and a female—all of which resembled the male parent. Not long after this, acting on the advice of the celebrated John Hunter, a man affected with Hypospadiasis impregnated his wife artificially. Since that time it has been often successfully resorted to for impregnation of the human female, and especially by Giraud, Marion Sims, Courtoy, Pajot, and others. We are not aware that it has been attempted to any extent in animals, though there is no reason why it should not at least be partially successful, if proper precautions are adopted. The offspring need not be weakly if the semen has fallen slightly in temperature, as the spermatozoa retain their activity for some time at a lower temperature than that of the body. In the interesting case described by our correspondent, the death of the two puppies was probably due to the condition of the bitch.]

INVESTIGATIONS AND OBSERVATIONS ON ANTHRAX AND OTHER DISEASES, MADE IN MARCH AND APRIL, 1883, IN THE DISTRICT OF SIALKOTE, PUNJAB, INDIA.

BY OFFICIATING INSPECTING VETERINARY SURGEON (2ND CIRCLE, BENGAL) RICHARD POYSER, F.R.C.V.S., A.V.D.

(*Continued from page* 183)

On the 30th March, 1883, the mare and pony were picketed on the sunken surfaces of two graves in which two virulent cases of equine Anthrax had been buried on the 5th April, 1882. They were not moved from these sites, were watered from buckets, and received no grain, but were fed only on the grass which grew on and around the very graves upon which they stood, and upon a most luxuriant crop of green wheat and barley (just in ear and freshly plucked up by the roots thrice daily) which had grown over and around the graves of five other Anthrax interments

which died, virulently affected, in May, 1881. They were also fed upon the grass and cereal crop growing on and about many other known anthracoid graves.

Whilst feeding, these animals were continually sniffing the grave-dust and ingesting it and the soil attached to the cereal roots from the other graves. After a week a foot of the surface soil of their standings was dug out and scattered about them. After two weeks the tops of their grave-standings were watered; no more crop being available, the experiment closed on the 18th April, 1883, after twenty days' duration.

The temperature of each animal was carefully taken and registered morning and evening; but as there was hardly any variation from the normal standard, the readings need not here be quoted.

Not the slightest deviation from health presented itself, except a trifling Diarrhœa in the pony, caused by the fresh green crop on an impoverished system, when the temperature fell to 97°; and this arose, of course, from the rectum being cooled by the external air.

The experiment, therefore, was a failure in so far as neither subjects became affected with Anthrax.

Notes.—1. Brigadier-General G. H. Murray forwarded this report (minus the experiment report, which was not ready), with a map on which all villages visited were shown, considering it of "so exhaustive and valuable a nature as to deserve being printed for general information and for submission to Government."

2. Lieutenant-General Sir M. Biddulph, K.C.B., remarks:—"Veterinary Surgeon Poyser has made a thorough and very laborious examination of the villages indicated, and the report he provides is very complete, going as far as it is possible, in the present state of our experience, into this mysterious question.

"The abstract B shows the number of animals which have died between 1st April, 1882, and 31st March, 1883, in 166 villages surrounding Sialkote, and also that 193 have died of Anthrax. It is, however, only on the report of natives that this estimate is based.

"No further light has been thrown on the *origin* of this strange disorder."

After quoting the portion of report marked, Sir Michael Biddulph observes :—"It is worth while, however, to obtain as many facts as possible ; and although Veterinary Surgeon Poyser has written so much, I should wish him to pursue the subject a little further," and submitted the following questions, to which I replied, *vide* parentheses :—

1. Have the villages * where Anthrax carcases have been buried suffered more than other villages further from the zone so affected ?

(Not so much as evidenced by the map, wherein the position and number of Anthrax cases are indicated by parallel lines and Roman numerals in black ink.)

2. Have the horses and stalled or other cattle of the city and bazaar suffered losses by Anthrax, and where is their food procured from ?

(Doubtless, but so far as the city proper is concerned, the Commissioner of Sialkote has not yet afforded me the information solicited six weeks ago. Food is procured from the surrounding district.)

3. Do horses and cattle that graze in the farther off villages suffer equally with those near ?

(Yes ; and according to the details accumulated for the past year, more.)

4. Can it not be proved that cattle and horses have caught Anthrax whose source of food or grazing has been quite free from the contamination of Anthrax carcases ?

(In the present state of our knowledge it could not be proved, because we cannot for certain declare that any particular source of food, or the food itself, is free from Anthrax contamination or not.)

Sir Michael continues :—"The replies to these queries as a further observation, and the result of the experiment" (herein recorded) "being tried of grazing horses on Anthrax graves, may afford experiences which will throw light on the subject.

"I shall recommend the report to be printed when the further required information is recorded."

* The question refers to the villages nearest the ground usually employed as a burial site for Sialkote troop horses dying of Anthrax.

A

ABSTRACT OF THE NUMBER OF ANIMALS PRESENT AT THE END OF MARCH, 1883, IN 166 VILLAGES SURROUNDING SIALKOTE, INSPECTED BY VETERINARY SURGEON R. POYSER. CITY AND CANTONMENTS NOT INCLUDED.

Oxen.	Cows.	Buffaloes, male.	Buffaloes, female.	Cows, calves.	Buffaloes, calves.	Sheep.	Goats.	Horses (chiefly ponies).	Donkeys.	Mules.	Pigs.	Total.
9,181	7,194	6,383	3,350	4,175	2,249	3,229	3,389	539	674	18	18	40,399

DEATHS BETWEEN 1ST APRIL, 1882, AND 31ST MARCH, 1883.

461	194	267	419	116	163	43	37	18	11	...	...	1,729

B

ABSTRACT OF DEATHS ENUMERATED BELOW WHICH OCCURRED BETWEEN 1ST APRIL, 1882, AND 31ST MARCH, 1883, IN 166 VILLAGES.

April.	May.	June.	July.	August.	Sept.	October.	Nov.	Dec.	January	Feb.	March.	Total.
23	49	42	166	150	250	146	145	187	305	210	56	1,729

TABULATION OF DISEASES FROM WHICH 1,729 ANIMALS DIED BETWEEN 1ST APRIL, 1882, AND 31ST MARCH, 1883, IN 166 VILLAGES.

Anthrax.	Rinderpest.	Foot-and-Mouth Disease.	Hoven.	Scabies.	Rabies.	Parturition.	Abortion.	Castration.	Age, Debility, Starvation, Neglect, Cruelty, Overwork.	Snake-bite.	Broken Legs.	Indigestion.	Falling into Wells.	Other Accidents.	Unrecognisable Disease.	Existing Disease.	Total.
193	687	251	87	99	5	7	3	1	270	5	6	13	3	10	57	32	1,729

Editorial.

THE ARMY VETERINARY DEPARTMENT IN INDIA.

THE discussion raised in the House of Commons on March 7th, an abstract of which appears in our Parliamentary Intelligence, on the motion brought forward by Dr. Cameron, for the appointment of a Select Committee to inquire into the working of the Commissariat and Transport services of the British and Indian armies in the recent Egyptian campaigns, and to consider what changes, if any, are required to secure increased efficiency in these services, was of the greatest importance to our army, and not less to that important branch of it, the Veterinary Department. Dr. Cameron, in calling attention to the "cruelty, waste of money, and danger to British arms in recent campaigns, caused by the defective organisation of the Indian and British Transport and Commissariat services," did great service in exposing some of the grossest possible blunders in connection with the Afghan and Egyptian campaigns, through neglecting the services of veterinary surgeons. The tale was a most lamentable one, and the facts and figures brought forward with so much care and lucidity by the learned doctor, evidently startled the House, as they did the public on the following day. Indeed, the Under-Secretary of State for India was compelled to admit, with reference to the campaign in Afghanistan, that "the report of Sir M. Kennedy on the deficiency of transport was one of the most melancholy pieces of military reading ever published." This report, it may be added, only touched the fringe of the subject, and is mild when compared with some of the semi-official and private reports, which afford the most painful revelations it is possible to conceive with regard to the cruelty and losses that must inevitably attend campaigning, especially in such a country as Afghanistan, when it is attempted to dispense with the services of veterinary surgeons.

Allusion has frequently been made in this journal to the reprehensible, almost criminal neglect, which led to such disastrous results, and our comments have been no stronger than the circumstances warranted. But out of evil cometh good, and it is satisfactory that the Committee asked for is to be granted, but only with regard to the Egyptian campaign, in which the Army Veterinary Department did such excellent work and received universal praise. The Afghan campaign is not to come within the scope of inquiry, as Mr. Cross stated the Indian officials have taken the lesson to heart, and are adopting measures which, it is believed, will prevent a recurrence of such disgraceful and needless atrocities and losses. What these measures are likely to be, the Under-Secretary for India stated, and if they are carried out fully and effectively they will go a good way to attain their object. Veterinary schools for the training of native farriers, or "salootries," are established in the different presidencies, as these, it is expected, will be able to act as veterinary surgeons or assistants, both in the army and in civil life, thus relieving the army veterinary officers from heavy and exacting duties, which are imposed upon them in the suppression of contagious diseases.

Mr. Cross, however, and those who share his views, have evidently an exaggerated notion of the value of the native farriers. Up to a certain point, after much training, they are useful, and may be entrusted with functions which do not demand the special qualities and qualifications English veterinary surgeons possess. Beyond this they cannot go, unless past experience of them has been fallacious. Veterinary Surgeon Anderson, in his report on the Egyptian Campaign, alluding to the existence of Glanders among the horses of the Bengal Cavalry, states that the chief salootrie of the regiment, one of the most intelligent of this class he had ever met, was riding a horse affected with well-marked Glanders, which he did not discover. This regiment, like the majority of native cavalry regiments, was entirely in the hands of native farriers, and had been infected with Glanders for several years, embarking for Egypt with the disease among its horses.

It is indeed astonishing, almost incredible, that such a state of affairs as Dr. Cameron disclosed could have existed in India; but the Indian Government, for some reason or other, has persistently ignored veterinary science in the army, as well as neglected the benefits it would have conferred on the agriculture of that immense country. Millions and millions of pounds sterling have been, and are now, lost annually from the sheer indifference or culpable ignorance of the Indian Government. There are no civilian veterinary surgeons to attend to the immense numbers of domestic animals required in that country, and the staff of army veterinary surgeons is too small, under-paid, and over-worked. Army service in India is distasteful to the last degree, through the unfeeling and very unsatisfactory treatment veterinary officers receive there; so that there is great difficulty in inducing them to serve under the Indian Government—indeed, service in India is compulsory, and looked upon as almost penal.

But there is now some prospect of a change for the better, both for India and veterinary officers, and we trust that before the present year expires a new system of carrying on civil and military veterinary service will be established there, which will not only greatly benefit India, and prevent the recurrence of such disasters as have shocked the public for some time and proved so ruinous to that country, but will also attract, through the Army Veterinary Department, the very best men who become graduates of the Royal College of Veterinary Surgeons.

It is now recognised by general officers commanding, that on a campaign, of all the departmental officers none are more useful than veterinary surgeons, and in our future wars there can be no doubt they will play a larger part than hitherto, the advantages derived from their services being so essential to success. It is earnestly to be hoped that this view will also prevail in India, and that the department there will not be under-estimated, nor kept to a starvation standard in point of numbers.

The Indian authorities have been terribly slow to learn, and the false economies they have been making have been productive of terrible havoc, and furnished us with some of the most harassing tales of animal suffering and animal loss we have ever read or heard of.

M. PASTEUR ON RABIES.

In a communication read at the meeting of the Académie de Médecine, February 26, M. Pasteur gave an account of the results of the researches which he has been pursuing, concerning Rabies, since his former communication in 1882. They are based upon a large number of experiments made on various animals, by inoculating the surface of the brain with rabid virus, or by introducing this into the circulation. The following are the chief conclusions to be derived from these experiments. 1. The spinal cord becomes affected by the virus of Rabies before the medulla oblongata. 2. The virus has its seat not only in the encephalon and the spinal cord, but in the whole nervous system from the centre to the periphery, a fact which explains the nervous excitement manifested in so many instances, as well as the strange symptom, ærophobia, often exhibited in men. The virulence of the saliva and of the salivary glands has been demonstrated on dogs rendered rabid by intra-cranial or intra-venous inoculations, as well as in those attacked by so-called spontaneous Rabies. 3. The virus may be possessed, with all its virulence, in the encephalon and cord during several weeks, when putrefaction of the bodies is prevented by a low temperature. The virus also enclosed in hermetically sealed tubes may be preserved for three or four weeks at a summer temperature. 4. The virus of Rabies may exist in the cerebro-spinal fluid, but its presence there is not constant. 5. Although the brain in Rabies is distinguishable from the healthy brain by the greater number and delicacy of the molecular granulations, no microbe has as yet been detected. 6. We know, that usually when a bitten dog becomes mad, he becomes furious, with a propensity to bite, and a peculiar bark; but in these experiments, when the virus was passed into a vein or the subcutaneous tissue, the paralytic form of the disease was ordinarily produced without fury or barking, while when intra-cranial inoculation was resorted to, furious Rabies was the usual result. This latter form was only producible by intra-venous or hypodermic injection, when very small quantities of virus were employed. The smaller the amount of virus employed for these injections, the more easily was furious Rabies produced. On the other hand, the inoculations of small quantities of virus greatly prolonged the duration of the incubation; and if the dilutionbe pushed beyond a certain limit, which is not very high, the inoculation produces no effect. But while these small quantities do not induce Rabies, the animal is still susceptible to the infection in subsequent inoculations, that is, the first inoculation confers no immunity. 7. As had been already observed in the dog, so in the rabbit, there may be a remission of the early symptoms of Rabies, with a recurrence of the disease some time afterwards. This occurrence is, however, very rare both in the dog and the rabbit, while in the fowl it frequently takes place. 8. Numerous experiments have been made with regard to the alleged attenuation of the virus of Rabies by the action of cold; but the results have been entirely negative. 9. The certainty of inoculation by intra-venous injection of the virus, proves that the hypothesis of its passage from the periphery to the nerve centres by means of the nerves, cannot be regarded as its sole channel of propagation, and that in most cases its absorption takes place through the circulation. 10. The passage of the virus through different species of animals, permits of a more or less considerable modification of its virulence. Rabbits, guinea-pigs, fowls, monkeys, all take Rabies; and when, by successive inoculation, the virus attains a kind of fixity proper to each genus, the different viruses vary greatly in strength, and differ appreciably in this respect from the canine virus, the virulence of which has become fixed by its numerous passages from dog to dog, by means of bites, from time immemorial. M. Pasteur is no believer in spontaneous Rabies. At the present time we are in possession of a virus

which imparts Rabies to a rabbit in seven or eight days, with such constancy, that we are able to assign to within some hours, so to say, the duration of the incubation, measured by the change of temperature, or by the first manifestation of the symptoms. We also possess a virus which will give Rabies to the guinea-pig in five or six days, with not less constancy in the duration of the incubation. As the nearest approach to man, M. Pasteur is at present engaged in a series of experiments upon the passage of Rabies from monkey to monkey. II. In a former communication, M. Pasteur stated that he had some dogs in his laboratory which had proved insusceptible to all modes of inoculation; but at that time he was unable to state whether they were naturally insusceptible to the poison, or had been rendered so by some of the circumstances to which they had been submitted. He now believes that they were not constitutionally insusceptible, for he has now discovered a practical method of rendering the dog insusceptible to Rabies at will. Considering, however, that the inoculation of Rabies may be very prolonged, and that this may always throw doubts on the proofs adduced, he asks the Academy to give credit for a time to his assertion, that this insusceptible condition may be produced by a system of inoculation. He possesses at the present time 23 dogs which have been subjected to virulent inoculations without danger. "To thus render the dogs insusceptible to Rabies would be not only a solution of the question of prophylaxis of this affection in the dog, but also in man, as man never contracts Rabies but as the result of a bite, the virus from which proceeds directly or indirectly from the dog. May not human medicine profit by the long duration of the period of incubation of Rabies, and endeavour to establish in this interval of time, before the appearance of the first hydrophobic symptoms, a condition of insusceptibility on the part of the bitten persons? But before such a hope as this can be realised, a long path has yet to be traversed."

GLANDERS IN NORTH AMERICA.

FROM information received from correspondents in different parts of the Province of Manitoba, there is every reason, states the *Winnipeg Free Press*, to fear that Glanders is exceedingly prevalent among horses. This disease is invariably fatal in its effects, is highly infectious and contagious, and dangerous alike to man and beast. In the absence of any practical law relating to diseases of animals during the earlier settlement of the province, Glanders appears to have secured a foothold. It is, however, gratifying to know that the Department of Agriculture, Statistics and Health has commenced a vigorous campaign with the object of securing its eradication. The utility of the new law passed by the Legislative Assembly last session has already become evident. Since then a Veterinary Sanitary Service has been established as a branch of the department, with a consulting veterinarian as adviser of the department, and fifteen district veterinarians acting in different counties. These have been instructed to rigidly carry out the law, and it is hoped that further spread of the disease will be averted. Many of the public are probably not aware of the serious results which would arise if prompt measures were not taken to stay the progress of the disease. The State of Illinois was visited last year by an epidemic of Glanders which proved so destructive to horses, and included so many human beings among its victims, that the state legislature voted a special appropriation of 25,000 dols. to secure its stamping out. It is hoped that such an expenditure will not be necessary in Manitoba, but the people of the Province will, no doubt, endorse any reasonable expenditure incurred in this connection.

FOOT-AND-MOUTH DISEASE IN THE UNITED STATES.

As might have been anticipated from the cattle traffic between the United States, hitherto free from Foot-and-mouth Disease, and this country, in which it has been so very prevalent, the disorder has appeared in two widely distant part of the States. It was introduced into Portland by diseased cattle from England, the ship *Ontario* having arrived there with a herd of twenty-eight Hereford cattle on February 2nd. These appeared to be healthy on their arrival, and were driven some distance along a road to a quarantine station. A few days afterwards they were reported to be suffering from Foot-and-mouth Disease, and a pair of oxen which were drawing a load of wood behind them on their way to quarantine, and had subsequently mixed with other native cattle, became diseased, and infected the latter. The disease was in such a mild form in the Hereford herd that the malady escaped the notice of Mr. Thayer, the veterinary surgeon who inspected them on landing. He, however, with Veterinary Surgeon Bailey, of Portland, diagnosed the disease soon afterwards among the native cattle, sixty-two head of which have been infected. Of course, prompt measures were immediately adopted to limit the spread of this insidious plague, but we know not yet with what result.

At the commencement of March, an outbreak of Foot-and-mouth Disease was reported at Neosho Falls, Texas. On the 8th of that month it was limited to an area of about five square miles, but was spreading. One hundred beasts had been attacked. On the twelfth the secretary of the cattle commission telegraphed that the infection had been carried there by two Scotchmen, who came direct from an infected herd in Scotland.

These outbreaks in the United States are not of serious moment, if proper measures are adopted. The Americans are a thoroughly practical people, and are not likely to make the stupid blunders we are always committing with regard to this and other contagious diseases of animals. They are not likely to view them from a political standpoint, and make political capital out of them, as is done in this country; and though, as with ourselves, they have sadly neglected veterinary science, and left it to fight its own way or succumb in the struggle, yet when once they find their agriculture seriously compromised, they will doubtless take up this question of Veterinary Sanitary Science with their usual dash, and get ahead of the old-world notions which still fetter and half ruin us.

CENTRAL VETERINARY MEDICAL SOCIETY'S CONVERSAZIONE.

A VERY interesting evening was passed by the Fellows of the Central Veterinary Medical Society and their guests on the 24th January last. The rooms of the Medical Society of London, Chandos Street, were particularly well adapted to the purposes of the conversazione; the principal objects of interest were ranged round the large hall, and a smaller room was occupied by the microscope tables and a few other exhibits. Professor Axe had superintended the display of a very instructive series of prepared specimens, most of them being the result of his own studies, and the score or so of microscopes attracted and interested a continuous stream of visitors. Here also was shown Mr. D. McGill's beautiful instrument, the cardiograph, for the horse, together with several tracings taken under various conditions; Mr. McGill also exhibited an improved form of hobble. Adjacent to this was the embryotomy forceps or bone shears invented by Mr. G. Gray, together with his large speculum and syringe.

The collection of novelties and improvements in veterinary instruments shown by Messrs. Arnold and Messrs. Krohne and Sesemann well repaid a

careful inspection, though they were too numerous to specify here. Messrs' Burgess, Willows and Co., in another portion of the hall, showed an attractive assortment of their specialities in drugs and compounded medicines, the encapsuled balls and coloured coated dog pills being very noticeable features.

Professor Tuson's disinfectant came in for a great share of attention, the methods of its operation being experimentally demonstrated; as, for instance, the decomposing action which it exerts upon sulphuretted hydrogen being proved by the deposit of sulphur in the flask. That it is a valuable antiseptic was conclusively proved by the exhibition of a pony's thigh (presentably decorated) which had been kept for four months in a perfectly fresh condition throughout by means of two sprayings with "Sporokton" in its liquid form.

Very ingenious and original were the large number of articles exhibited by Mr. W. South, the cervical vertebræ and other portions of the horse's frame being worked up, with various fittings and silver mountings, into such useful and ornamental objects as inkstands, candelabra, snuft-boxes, etc.

The pathological specimens were of great interest, notably those prepared by Professor Axe; several other gentlemen also had fowarded curiosities in this department, such as those from Messrs. Shipley (Yarmouth), Cooper (Dover), Samson, Rowe, and from the College Museum; among the latter were the facsimile representations, in wax, of the lesion characteristic of Cattle Plague; these models are the work of Mr. Tuson, who also contributed his unique water-colour drawings, depicting in the most minute and faithful manner the daily progress in the development of the chick. Mr. J. Rowe showed a highly complete and finished set of parturition instruments, devised for canine practice. Mention should also be made of the illustration of the uses to which luminous paint can be applied; this was given in a small room, kept darkened for the purpose, and was a focus of interest throughout the evening; among many applications of the paint suggested and shown were those for poison bottles, door plates, night bell-pulls and plates, keys, clock faces, etc. Many other of the exhibits were calculated to interest visitors not versed in medical science, for, in addition to numerous articles having relation to horses and stables, as various models and patents, the objects of art were many and attractive; the singing, also, which was given at frequent intervals throughout the evening by the glee party and solo vocalists, was highly appreciated. The library adjacent to the large room was devoted to the dispensing of tea, coffee, ices, and other refreshments.

Of the Fellows of the Society and professional friends the following were present: Professor Robertson, Professor Axe, Professor Tuson, Messrs. T. Greaves, W. Whittle, J. B. Martin, F. W. Wragg, J. Woodger, W. South, A. Prudames, E. C. Shave, J. Broad, Arthur Broad, A. C. Cope, H. C. Legge, W. Wilson, H. J. Hancock, W. Hunting, J. Rowe, C. Sheather, F. G. Samson, A. Broad, W. Mole, D. McGill, T. G. Batt, J. Penberthy, E. Batt, H. W. Caton, J. E. Jarvis, W. Roots, E. M. Davy, A. Rogerson, G. Gray, and A. H. Archer. Among the guests were Sir Joseph Fayrer, Dr. Quain, Professor Tanner, Professor Corfield, Dr. Garson, Dr. Power, Dr. Evans, Dr. Sansom, Dr. Collingridge, Dr. Binnie, Professor Jameson, Dr. Purcel, Dr. Moritz, and several other representatives of the medical profession. The President, Professor Pritchard, Dr. Fleming, and Mr. J. Roalfe Cox, who had taken active parts in the arrangements for the conversazione, expressed regret that they were unable to attend in consequence of their duties as examiners. The rooms were well filled, as, in addition to those named, there was a very great number of friends of the members and a large proportion of ladies; it was a late hour before the company dispersed, and the opinion was generally expressed that so highly successful and useful a meeting ought to be repeated at an early opportunity.

A. BROAD, *Hon. Sec.*

Proceedings of Veterinary Medical Societies, &c.

CENTRAL VETERINARY MEDICAL SOCIETY.

A MEETING of the above Society was held on the 7th February, Professor Pritchard presiding; Messrs. F. W. Wragg, G. R. Dudgeon, H. Davies, F. R. Ingersoll, F. G. Samson, H. J. Hancock, T. Burrell, J. Rowe, and W. Hunting were also present, and two visitors were introduced.

Mr. F. W. Wragg then gave his experience of the recent outbreaks of Influenza in a lucid and pithy essay, which was received with great interest.

On its conclusion the PRESIDENT expressed his pleasure at hearing the essayist's practical remarks, and invited discussion on the subject.

Mr. BURRELL remarked on the absence from the essay of particular allusion to that type of the disease known by the name of Bilious Fever. As an appellation for the malady too commonly styled "Pink Eye" he preferred that of "Mucous Fever"; the conjunctival and enteric membranes were, he said, both affected, shreds of mucus being frequently voided. Carbonate of ammonia had been alluded to; he considered it beneficial in some cases, but thought it very probable that large doses of this salt had been the cause of much aggravation of the original disorder. He would rather administer tincture of bark, with muriatic acid. He thought that the rheumatic complications were met with, generally, in those types of the disease wherein the serous membranes were involved. The exact definition of Influenza was difficult, in so many different forms did it appear.

Mr. SAMSON agreed with the essayist in considering the disease infectious; he found, too, that the older the horse the less his liability to contract it. He also advocated the employment of counter-irritation in laryngeal or pulmonary complications, preferring mustard to other applications, and recommended that steaming the head by means of scalded hay be resorted to. He adverted to the omission from the essay of allusion to the marked tendency to dropsical engorgement during Influenza, and said that the medicines he had most faith in were carbonate of ammonia and gentian. Quinine, also, should be given in some cases notwithstanding its expense.

Mr. ROWE alluded to the annual appearance in London of diseases which went by the name of Influenza. He had lately observed many of the bilious type. It had been stated, he said, that large doses of ammon. carb. might be safely administered, but he restricted his doses to one-and-a-half drachms, unless sulphate of magnesia was given at the same time, as then the irritating action of the ammonia upon the fauces and buccal membrane was lessened. As a useful agent he greatly prized old ale.

Professor PRITCHARD questioned the advisability of giving sulphate of magnesia and ammon. carb. in combination, and, in allusion to the last speaker's statement that balls so prepared had burst their covering, said that was quite what he should expect as a result of chemical action. Giving large doses of carbonate of ammonia was simply a question of proper dilution. If this point received attention, three or four drachms might be given without harm, but two drachms would be sufficient to cause untoward symptoms if insufficiently diluted.

Mr. HANCOCK complimented the essayist on the useful ideas to which he had given expression. The various forms assumed by this Protean malady had been universally noted; the point to be aimed at was to find the reason for this diversity; in his opinion, veterinary surgeons were "at sea" in this matter. To his mind, the arguments in support of the essentially infectious nature of Influenza were not thoroughly conclusive. At times the disease would spread through the whole stud, while in another instance only two or three of a large number of horses would be affected. In stables where case after case of Influenza had occurred, he had frequently found the drainage at

fault, or some other demonstrable defect in the sanitary condition. He thought the disease was due to atmospheric influences, and that its severity was occasionally exaggerated by local surroundings. He agreed with Mr. Burrell in considering "Pink Eye" to be a Mucous, or Muco-Enteritic Fever. Stimulants were his sheet anchor in treatment—carbonate of ammonia, the aromatic spirits, and whisky were the most useful; eggs and milk were given with good results. In a case or two of a serious nature, he had recourse to whisky and milk; the owner of the horses expressed himself as delighted at the successful issue, also with the treatment, provided that all similar stimulants were supplied at the veterinary surgeon's own expense.

Mr. HUNTING was of opinion that the term Influenza was used to describe several disorders. Two years ago a great number of horses were affected with sore-throat and febrile symptoms, yet it was no more than a local disease due to changes in the weather. Influenza is strictly a Fever, and its proper title would be Catarrhal Fever; where there is no catarrh, Influenza is not present. Sixty years ago Typhoid was not distinguished from Typhus Fever; in course of time he believed we should classify, under different headings, more than one disease now passing as Influenza. He had treated a number of cases of so-called "Pink Eye," and did not find, as in Influenza, a tendency to pleuritic complications, but rather to bowel inflammation, and a frequent rise in temperature to 106°, a point not commonly reached in Influenza. "Pink Eye" was, he thought, a distinct disease, and introduced from some foreign country. Influenza was undoubtedly contagious; it behaved in a similar manner to other contagious diseases; it travelled from one part and from one stable to another; when fresh horses were brought in, then the disease appeared. It was difficult, he said, to explain why Influenza should visit one stable more than another; in a yard under his observation, where the complaint recurs almost annually, it was one particular stable that was affected, the one in which the new horses were put. The best ventilated and drained stable may suffer, while in one quite opposite in these points no disease of the kind appears. Condition of stable seems to influence the advent of Influenza but little, movement of horses has more effect; thus it is most prevalent in dealers' stables. The first appearance of Influenza in this country is historically recorded, so that he had a right to ask, what changes had taken place in our climate since that time?

Mr. BURRELL said that he differed from the opinion apparently held by Mr. Hunting, that "Pink Eye" was a disease but recently seen in this country. He remembered an outbreak of an epizootic disease in 1851, which had similar characteristics. It was very severe, and but little understood, the mortality being great, chiefly on account of the very free use of purgative medicines.

Mr. WRAGG, replying, said that he had endeavoured to describe Influenza generally, without separately touching upon each of its forms and complications. He considered the name "Pink Eye" should be supplanted by that of Mucous Fever; he also agreed with the suggestion of Mr. Hunting, that Influenza should be classed as a Fever, its various types being distinguished by different names. He did not find any tendency to Purpura engendered by the use of ammon. carb., but gave it in considerable doses with much apparent benefit; it was said to cause too free action of the kidneys, but when this action took place the patient soon recovered. Mr. Samson, he noticed, recommended gentian, but he found that it induced purging, and therefore did not give it till the bowels were in a normal state. He had found the catarrhal form prevail during 1883, and the enteric in 1882. He agreed with the use of beer as a tonic; he avoided the application of counter-irritants as much as possible.

The meeting was terminated by a vote of thanks to the essayist.

ALFRED BROAD, *Hon. Sec.*

LINCOLNSHIRE VETERINARY MEDICAL SOCIETY.

THE annual meeting and dinner was held at the Angel Hotel, Peterboro', on the 28th of February; the President, Capt. B. H. Russell, Grantham, in the chair. The following members were also present, viz.:—Messrs. Brown, Navenby; Gresswell, Peterboro'; Greaves, Manchester; Dickinson, Boston; Spencer, Wragby; Whitworth, Grantham; Mackinder, sen., Peterboro'; Hoole, Heckington; Mackinder, jun., Peterboro'; Gooch, Stamford; Runciman, Market Deeping; Carless, Lincoln.

The minutes of the previous meeting were read and confirmed.

Mr. SPENCER proposed and Mr. GRESSWELL seconded the election of Mr. G. Osborne, Fulstow.—Carried unanimously.

Mr. CARLESS proposed and the PRESIDENT seconded the election of Mr. Gooch, Stamford.—Carried unanimously.

The PRESIDENT proposed and Mr. WHITWORTH seconded the election of Mr. Mackinder, sen., Peterboro'.—Carried unanimously.

The SECRETARY read letters from Professors Walley, Robertson, and Williams, and T. Greaves and G. Fleming, Esqs., thanking the Association for the honour of being elected Honorary Associates.

The election of office-bearers for 1884 was then proceeded with, and the following gentlemen, after being duly proposed and seconded, were elected:—

President: Mr. J. Mackinder, jun., Peterboro'. *Vice-Presidents:* Capt. B. Russell, Grantham; Mr. Gresswell, Peterboro'; and Mr. Hardy, Sleaford. *Secretary:* Mr. F. Spencer, Wragby. *Treasurer:* Mr. W. Carless, Lincoln.

Mr. J. MACKINDER then read a very interesting paper on Anthrax:—

Mr. President and Gentlemen,—The subject I have chosen to bring before you to-day—Anthrax—is one that we, as country practitioners, are greatly interested in, as it affects all the domestic animals with which we are brought in contact, and which, at the present time, is causing deep study and investigation on account of its importance to agriculturists and mankind. I shall endeavour to lay before you briefly its nature and causes, the forms in which it presents itself in different animals, and the treatment and preventive measures I consider applicable to each case. The true nature of Anthrax is still of very great doubt, even at the present time, although it has been described by the earliest writers, so early that one of the plagues the Egyptians suffered from has been recognised as one of the types of Anthrax. That it is of miasmatic origin is certain from the invariable presence of a number of Bacilli (called the *Bacillus Anthracis*) in the blood of animals affected with it. These Bacilli have the power of reproduction, and causing in other animals a similar disease. They are very tenacious of vitality, and act on the constituents of the blood by producing fermentation. The germs of these Bacilli are very small, so that they may be carried by the atmosphere or taken in the food. I now come to the second part of my subject—the cause. Atmospheric influences favour the development of this disease, it being prevalent in hot seasons on badly-drained soils, and in wet seasons on rich pastures. Animals that are suddenly brought from a spare diet to a rich one are very susceptible of this disease. Artificial foods and manures are also a prolific cause of this disease—the former from producing a rapid tendency to fatten, and the latter from its effect on the productions of the soil.

Want of exercise.—This is more especially noticed in young animals, and is in my opinion one of the great causes of that form of Anthrax known as Black-leg.

Contagion.—This is, in my opinion, a prolific cause of this disease, principally from the custom of cutting the throats of animals that are dying from the disease in the field or yard where other animals are.

Forms of Anthrax.—I purpose speaking of those forms of Anthrax mostly

met with in this district, viz.: Anthrax by contagion in the horse, Splenic Apoplexy in cattle and sheep, and Black-leg.

Anthrax in horses, by contagion.—I cannot lay too much stress on the seriousness of this form, having witnessed in my practice frequent outbreaks of it. A few years ago I was requested to visit some horses near Long Sutton. Upon my arrival I found one dead, and two others very seriously ill with Anthrax. Upon making inquiries I found that the owners had, the day previously, lent a cart to a neighbour to fetch a beast out of a field, to a butcher's slaughter-house, for the purpose of being dressed for human food. The bullock had been found in a dying state, and the owner at once cut its throat; consequently the inside of the cart was smeared with blood. After brushing the cart out it was used to fetch green clover up for the horses' provender, and hence this outbreak of Anthrax. Still more recently, a severe outbreak of it took place in the neighbourhood of Stamford. My father was requested to meet Mr. Gooch, at Stamford, to investigate the cause of the outbreak, one horse being then ill and the owner had lost four others. Upon making inquiries it was ascertained that a few weeks before the owner had lost some cattle with Splenic Apoplexy; their throats had been cut in the yard. From this yard there was a drain which ran alongside a field where they were pastured. The horses were taken ill, and all the five died. To show more fully that the disease was Anthrax, with which the horses were affected, I may mention a very serious result from it. A man who was employed to skin one of the horses died from blood-poisoning. I could enumerate several outbreaks of Anthrax among horses from this cause. Therefore it behoves us, as veterinary surgeons, to caution our clients against this practice. I now come to what I consider the most virulent form of Anthrax, viz.: Splenic Apoplexy. This disease affects both cattle and sheep, and is particularly fatal and sudden. Almost always the first indication of it is the finding of one animal dead, or dying, in the field or yard. They may be apparently in good health, have over-night partaken of their food as usual, and are dead in the morning. In other cases the disease seems more lingering. The animal arches its back and walks backwards; the eyes are prominent and bloodshot; pulse very quick and small; fæces dry and hard, and stained with blood; urine of a very high colour; convulsions follow, and death ensues. The symptoms in sheep are very analogous to those in cattle. The disease may be easily diagnosed by closing the nostrils and causing the animal to urinate, when it will be found that the urine is tinged with blood. The flesh of animals that are slaughtered in consequence of this disease should never be used for food, it being, in my opinion, highly dangerous to mankind.

Black-leg.—This disease, known also as Quarter Evil, is so well known to you all that I need hardly speak of the symptoms.

Preventive measures.—I think the first place is due to the practice advocated by M. Pasteur, of inoculation. The theory is that if you produce a mild form of Anthrax, by the use of an attenuated virus, the animal so inoculated will be proof against any future outbreak. A full report of the method may be found in the VETERINARY JOURNAL for June, 1882. I cannot speak practically of the results arising from this. I can only say the Continental journals speak highly of it. All animals that have died from Anthrax should be buried six feet deep, with a thick covering of lime. The use of the lime is necessary, from the fact that the common earth-worm swallows the germs, and by bringing them to the surface gives rise to fresh outbreaks of the disease. M. Pasteur has conclusively proved this to be a fact, and in my own experience I have seen that when animals have been buried without the use of lime, stock placed in the same field, even after the lapse of two years, quickly fell victims of Anthrax. On those farms where

the disease frequently occurs I recommend all the young stock to be setoned when about nine months old; the older ones, when at grass, to have a frequent change of pasture, and when in the yard to discontinue once a week the use of artificial foods. Among sheep the frequent change of pasture will have the desired effect, together with rock-salt *ad lib.* In Splenic Apoplexy among cattle, the curative measures we are in the habit of advocating are as follows:—As soon as the disease has made its appearance after the burial of the dead animals as I have described, we administer to each a draught, consisting of Sod. chlor. ʒviij, in a pint of warm water. We then, in the winter season, order them to be turned out into a field, taking there a load of straw. If any of them is noticed to be at all dull, we at once cause it to be walked about for some hours. We keep them entirely from food, except the straw, until they call for it. If in the summer, we cause the whole of them to be walked about for several hours. The animals are strictly watched for several days, and if any of them show symptoms of the disease, we again administer the Soda chlor. I am not in favour of setoning when the disease has made its appearance, having witnessed inoculation by means of the seton needle. In proof of this, I may perhaps mention what took place some time since. A non-graduate setoned a number of beasts, amongst which Splenic Apoplexy had broken out. In a very short time eight of them died from inoculation. On being called in we at once advised the treatment I have described, with the satisfactory result of checking the disease. I may mention that great sloughing of tissue was the result of the setoning. I have endeavoured briefly to bring before you this treatment, having been so successful with it. I should very much like to hear from any present the means they have taken to check this disease and the result. I had intended speaking more of the germ theory, had it not formed the subject of discussion at our last meeting. I thank you for the kind attention you have given me, and trust that in any discussion that may follow some good may be the result, not only to ourselves, but the public at large.

An animated discussion followed the reading of Mr. Mackinder's paper, in which nearly all present took part.

It was decided that the next meeting should be held at Gainsborough.

A vote of thanks to the President and essayist then terminated the meeting.

The members subsequently sat down to an excellent dinner, provided at the Angel Hotel. Capt. Russell presided, and the vice-chair was occupied by the newly-elected President. A very pleasant evening was spent.

F. SPENCER, *Hon. Sec.*

ROYAL COUNTIES VETERINARY MEDICAL ASSOCIATION.

A MEETING of this Association was held at the Great Western Hotel, Reading, on the 29th of February, George A. Lepper, Esq., Aylesbury, President of the Association, in the chair. There were also present: Messrs. Flannagan, Reading; Drewe, Abingdon; Walker, Oxford; Simpson, Maidenhead; Wragg, Whitechapel, London; James East, Aylesbury; Castle, Thame; Irving, Chipping Norton; Darling, Bracknell; H. G. Lepper, Aylesbury; Wheatley, Reading; Verney, Oxford; Bull, Deddington; Hanks, Wantage; Hunt, Newbury; Wilkins, Lambourne; Varney, Winslow; Howard, Newbury; Mellett, Jun., Henley-on-Thames; and the Secretary.

The following members were unable to be present, viz.:—Messrs. Joseph East, Aylesbury; Simpson, Windsor; Pritchard, Haverstock Hill, London; Jones, Bristol; Wyndham Bryer, Cheltenham; Selfe, Bristol; Emerton, Stony Stratford; Sants, Bath; Stainton, Reading; Chisholm, Bicester;

Rumbolt, Bristol; T. W. Lepper, Aylesbury; Page, Banbury; Powell, Bletchley Station; Rippon, Newbury; and Barrow, Marlborough.

The minutes of the preliminary meeting were read and confirmed.

The Rules of the Association were read.

The next meeting was fixed to be held at Oxford, on the 25th of July next.

The following resolution was submitted and unanimously adopted: "This Association approves the notice of motion given by Mr. H. L. Simpson, of Windsor, to the Members of Council of R. C. V. S., and it expresses its decided opinion that it is clearly the duty of the said Council to consider the subject referred to in the notice of motion, and to give an expression of opinion thereon, which may in future guide the members of the profession as to the continuance or discontinuance of what they believe to be a necessary operation under many circumstances."

The PRESIDENT then delivered the inaugural address, as follows:—

Gentlemen,—We are met together to-day to inaugurate the Royal Counties Veterinary Medical Association, and it is with feelings of great pleasure that I rise to address you on this interesting occasion.

Allow me at once to congratulate those gentlemen who have striven so ardently to promote the formation of this Association upon the results of their efforts as shown by the large attendance here to-day.

This society, gentlemen, is only one of similar societies established in various parts of the country, which are each in their respective districts advancing the interests of their members in various ways, and exercising a most healthy influence upon our profession generally; and it would be more than strange if we who practise in the Royal Counties should in our apathy be deprived of the advantages to be gained from such an association. Your presence here to-day, however, effectually disposes of all danger of reproach in that respect.

I sincerely hope that this, our first meeting, may be the forerunner of many gatherings yet to come, where new friendships shall be formed and old ones cemented amongst us; where profitable discussions will be carried on in a friendly spirit, and a feeling of good fellowship generated to our mutual instruction and advantage.

Gentlemen, I beg to thank you most cordially for the honour you have done me in electing me your President for the year, at the same time I sincerely wished you had exercised your choice with more discrimination. I am bound to say there are many here who are able, *possibly*, to give more time to, and *certainly* able to bring greater ability to bear upon the objects of this association, but that I yield to none in my earnest desire to forward the interests of this Society. In the midst of a hard, working practice, it may be difficult regularly to attend the meetings, but it will always be my endeavour to do my utmost to further the welfare of this association and to promote the interests of our profession generally.

Gentlemen the objects of our association are fourfold, viz.:

1st. To promote the elevation of our profession.

2nd. To establish and promote a good and friendly understanding amongst its members.

3rd. To supervise and protect our professional interests.

4th. To read and discuss scientific subjects relating to the theory and practice of veterinary medicine and surgery.

Firstly, then, as to the elevation of our profession.

The veterinary profession in this country is very young; indeed, one might almost say it is scarcely out of its infancy. Its elevation is an important matter, and one which is uppermost in our thoughts. We have not advanced, it is true, with rapid strides, but, nevertheless, we have made progress, and when we take a retrospective view and calmly consider what

has been done and what improvements in our position have taken place, especially of late years, I think we ought to take courage for the future and steadfastly determine that no efforts of ours shall be wanting to elevate the status of the profession in the estimation of our clients and the country at large.

Previous to the year 1791, no veterinary school existed in this country, and it was not until 1844 that a charter was obtained, with the object, to quote from its preamble, "to improve the veterinary art, which had hitherto been practised generally by ignorant and incompetent persons, which had been long and universally complained of."

If we may judge from the scanty literature of the period relating to the treatment of diseases in animals, the universal complaint would seem to have been laid upon a very substantial foundation. However, from the early part of this century, men of our calling have been found working hard and earnestly for the good of those who were to come after them, and in our own days, I am proud to say, there are not lacking those who still follow the same laborious course, to their own honour and to the lasting benefit of their professional brethren.

Among the many improvements which have taken place of late, and the various benefits which have been conferred upon us, I would mention the examination in general education now insisted on previous to a pupil commencing his studies at the veterinary schools; and on this point I may say that, in my judgment, the Council will do well to raise the standard of this preliminary test from time to time, for there is nothing, depend upon it, which tends so greatly to retard professional progress in these times as a want of education, and, I venture to hope, that before long the candidates for entry to our schools may be subjected to as severe a test examination as is now applied to students of our sister profession.

The period of time to be spent in the schools has been lengthened, the examination for the diploma is more strict and searching, the Court of Examiners has been reorganised, a practical examination is most wisely insisted upon, and I trust it will be made still more practical. A new charter and also supplementary charters have been obtained, conferring lasting benefits upon us, Government appointments, both civil and military, are offered to us, and a veterinary department, now called the Agricultural Department, is established in the State. All these and many other instances, not to forget the efforts being now made to secure a decent and adequate home for veterinary science in London, tend to show that at all events some progress has been made; at the same time, gentlemen, I need scarcely remind you that it rests in a great measure with each one of us individually, whether or not our profession occupies that position in the eyes of the public which it ought to do. We must feel that the credit of the profession is carried by each of us on our own shoulders. Let us be true to ourselves, and we shall be respected by others, and our calling will attain the proud position which we should like to see it occupy.

Before leaving this part of my subject I would like to acknowledge the obligation we owe to His Royal Highness the Prince of Wales, who has most graciously received some of our leading men at Court, and removed the social ban which had been unjustly resting upon members of a noble profession in their exclusion from the Court of their Sovereign.

The *second* object of our association is "the establishing and promoting a good and friendly understanding amongst its members."

There are surely no great difficulties here to encounter. There may be prejudices to cast aside and personal difficulties between some of us to be removed; but these will soon vanish, if any such there be, provided we approach the consideration of our affairs with the determination to conscientiously do our duty to one another to the best of our ability. Looking at the importance

of the work which lies before us, it is greatly to be desired that we should feel a pleasure in professionally assisting one another.

As this society will be the vehicle for the interchange of ideas, so let it be our boast that any scientific discovery or successful treatment of disease be not wrapped up in the bosom of the happy discoverer or fortunate practitioner; let all reap the benefit of his success. Let the timely advice of the old practitioner be always available, and let his example stir up the young ones to habits of business and industry, and let not those who are getting grey amongst us forget how frequently we have profited by the studies and researches of those younger than ourselves.

Thirdly. "The supervision and protection of our professional interests" claims our attention.

These important matters rest in a great measure in the hands of the Council of the Royal College of Veterinary Surgeons, in whose election each of us has a voice.

The Council have succeeded in passing many measures, creditable to themselves and advantageous to their profession, for which they deserve our heartiest thanks. It would be idle for me to contend that the Council have been able to give satisfaction to the profession in every matter they have undertaken; but I do believe those who are in authority have the interests of the profession at heart, and will do their best to promote its welfare.

I am of opinion that *all members* of the Royal College of Veterinary Surgeons ought to be eligible to serve on the Council, and that the members of the Council should not be confined to *Fellows* of the College, and for this reason, viz.: that many who are well qualified in all respects for a seat upon the Council of the College are absolutely debarred by the cares of a large practice from giving the time necessary to enable them to pass the Fellowship examination, and if it be true that an attempt will be made to confine the candidates for office to Fellows, I am of opinion that it should be strenuously opposed.

The *fourth* object of this Association, although the last is by no means the least; it is "the reading and discussion of scientific subjects relating to the theory and practice of veterinary medicine and surgery."

You are well aware, gentlemen, how many and varied are the scientific subjects pertaining to our calling, and what a large field for scientific research is open to us. Those who wish to excel amongst us must not be content to study the anatomy of animals, to obtain an insight into chemistry and botany, to be able to administer medicines and to perform the operations of veterinary surgery, but they must become really scientific men as well as practical veterinary surgeons.

We all recognise that great advances have been made in veterinary literature of late years. Many and valuable are the additions to the small stock of works relating to veterinary surgery and medicine of our early days.

Little was known of what is now termed "preventive medicine"; formerly the "healing art" was alone considered. At the present day we seem to be on the threshold of a new era, in veterinary science, tending to the averting of diseases of animals, which cause loss to their owners and suffering to themselves. Would that the desired end were nearer within our grasp. The subject demands the closest study and many experiments in the future.

We are well aware, gentlemen, of the preventive influence of vaccination, and "preventive medicine" started from the study of the diseases of animals. So far I refrain from referring in detail to that branch of this subject; rather let me mention a few instances of the great benefits which have accrued from experimental research.

Pasteur, the celebrated French chemist, succeeded in warding off attacks of that fearful disease known as Splenic Apoplexy by inoculating animals

with a fluid containing the virus of the disease. It had been known for many years that the blood of animals affected with this disease contained a particular fungus, and it was believed that this lowly organised fungus was the cause of the disease. After collecting various facts and putting them together it was discovered that the disease not only spread from one animal to another, but that the carcases of buried animals were capable of disseminating the disease by means of worms which fed on the carcases and brought the poison to the surface of the ground. This was proved by feeding cattle over the graves of infected animals.

Continental veterinarians have vaccinated for Fowl Cholera, which ravaged the poultry-yards of France, with most interesting and satisfactory results; also pigs for Swine Fever, a disease which has wrought great havoc amongst the swine of this country.

Animals have been experimented on in order to discover in which fluid of the body the contagium of that mysterious and terrible disease, Hydrophobia, existed. Paul Bert injected into an animal the blood of a dog suffering from Rabies, and found the animal experimented on remained healthy and well. Having assured himself that the blood did not contain the disease he injected pure saliva, from the salivary glands, with the same negative results. He then strained through a filter the saliva, mixed with mucus from the lungs, and found that the solids which remained behind, and with which he inoculated, unfailingly produced the disease.

To touch upon another branch of research. Our attention of late years has been directed to the outbreaks of epizootic diseases amongst farm stock, which have occasioned immense loss to the country at large.

Many of us well remember the enormous loss sustained, and the fearful ravages committed by the Cattle Plague, in 1865-66, which was imported into this country from the Steppes of Russia—the most fatal of all diseases affecting cattle, and which has since visited us in 1872. The loss inflicted by the first outbreak amounted to millions of pounds, and entailed the ruin of hundreds of families; yet the treatment and cure of this awful disease are still vexed questions, and the cause of it is unknown.

The history of Epizootic Pleuro-pneumonia teaches us that it also is a disease of foreign origin, and although continually making its appearance years ago in various parts of the country, there have been long intervals when it seems to have been entirely absent, but since 1842 it has not failed to manifest itself continually in this country.

Inoculation for Pleuro-pneumonia has many advocates, and although it has its drawbacks, it should not only claim our attention, but our best consideration. I regret that I have not experimented in that direction myself. In an article in the VETERINARY JOURNAL I see it stated that "the evidence in favour of protective inoculation for this disease is now, it may be said, overwhelming. In every part of the world where it has been tried, its value appears to have been amply demonstrated, often even when the operation has been performed by amateurs."

The Dutch Government some eight years ago passed a decree authorising the burgomaster to order the compulsory inoculation of all cattle which had been in contact with diseased ones, the operation to be performed by a qualified veterinary surgeon, and the fee to be paid by the State; and this is, no doubt, more a matter for imperial than for individual consideration.

After making mention of the Rinderpest and Epizootic Pleuro-pneumonia, my thoughts naturally turn to a disease which I believe is one of the oldest of European diseases of cattle: I allude to the malady known as "Eczema Epizootica," or Foot-and-mouth Disease. It is not only one of the oldest, but one of the most infectious and contagious maladies which affects domestic animals, and is also, perhaps, the easiest of transmission.

We are well aware that its extension is due to its contagious properties, but the causes of the disease are wrapped in obscurity.

Mr. Fleming, in his admirable work on "Sanitary Science and Police," says that "we know no more of the causes which originally develop this malady than we do of those of Variola, Cattle-plague, or Lung-plague. Every cause that tends to diminish health has been invoked, but no sooner is it investigated than it is found to be incompetent to produce the disease. Sudden atmospheric changes, feeding upon altered or unhealthy food, drinking putrid or muddy water, grazing in marshy regions, fatigue in travelling, have been cited as occasional causes. We only know that it always appears in an epizootic form, that in certain times it becomes widely extended, invading whole countries, and that its extension is due to its contagious properties *alone*, and the facilities offered for the dissemination of the virus."

The disease was not known in this country, at any rate in modern times, before the year 1839, since which time it has frequently visited us. A most severe outbreak occurred in 1872, when, it is asserted, some thousands of animals suffered from the disease, and the loss in money to this country amounted to something like £13,000,000. The present serious outbreak, which has now lasted over a considerable period, is a subject which greatly claims our attention. Serious losses have occurred not only to farmers and dairymen, but to the country at large. The question has become one for the consumer of meat more than one for the consideration of the producer.

I regret that curative measures are not sufficiently thought of, and that animals are so seldom placed under proper treatment, which, in very many cases, would greatly mitigate the severity of the attack.

Efforts have been made by Government in order to stamp out the disease, *but so long as animals are imported from countries where the malady exists, so long will our flocks and herds suffer from repeated attacks.*

Local authorities have been blamed for their want of uniformity of action, but the great apathy shown on the part of the Government is very much more deserving of our censure.

In my own neighbourhood, the local authorities have acted in an exemplary and praiseworthy manner, and although they have not escaped censure, the active part taken by them in endeavouring to stamp out the disease, with the sincere desire to do their best for the country at large, is worthy of all praise. Had other local authorities acted in the same energetic manner, we should not have experienced the losses which have taken place.

There are other subjects, gentlemen, which I should like to touch upon; for instance, the many parasitic diseases, the various forms of Anthrax, and the vast number of sporadic diseases which occur in our everyday practice; it would, however, be impossible for me in a short address to range over the various subjects of veterinary medicine and surgery. I have referred to a few only which have come across my mind. I trust at our next meeting some one will be good enough to read a paper dealing with a particular subject, from which we shall derive far greater advantage than by ranging over several subjects as I have done to-day in this desultory manner.

It only remains for me, gentlemen, to thank you for the kind attention which you have given to my address. I am very conscious of my shortcomings, for which I claim your indulgence.

I beg, in conclusion, to express my hearty wishes for the long and enduring success of the Royal Counties Veterinary Medical Association.

Mr. DREWE proposed a vote of thanks to the President for his able and interesting address, which was seconded by Mr. HANKS and carried unanimously.

The members afterwards dined together, when a most enjoyable evening was spent.

H. KIDD, Hon. Sec.

YORKSHIRE VETERINARY MEDICAL SOCIETY.

[The following remarks on Azoturia were inadvertently overlooked in forwarding the proceedings of this Society, which appeared in the last number of the Journal.]

PROFESSOR WILLIAMS said: Mr. President and Gentlemen,—With your leave I wish to make a few remarks on Professor Axe's paper on "Azoturia," delivered before this Society at your last quarterly meeting, and in which he rather severely criticises my observations on this disease.

He says in the first place, "That the precipitate thrown down on the addition of nitric acid and subsequent boiling, is essentially albumen and not urea, as has been stated"; and again, "That while the amount of urea contained in the urine varies in different cases, it cannot be said to exist in any abnormal quantities," etc.

Now, in answer to Professor Axe's first assertion, I have to mention that Professor Walley, in a paper lately read by him, says that albumen is never present, and that the precipitate is always urea.

When I first investigated this disease I could have supported the observations of Mr. Walley without the slightest hesitation; but further experience has convinced me that in all cases the urea is abnormally increased, if properly tested for (but the method pursued by Professor Axe, namely, adding nitric acid and boiling, is simply ridiculous, as boiling dissolves the nitrate of urea); that in some cases albumen is present in slight or moderate quantities, and in very rare instances the albumen is rather abundant; for example, the very last case I have seen, and which is now under treatment, analysis of one ounce of urine, or 480m., gave the following results: albumen 1·31grs., urea 56·91grs. Now the precipitate of albumen was greater in this case than in any one that I had ever met with before, and it will be seen that the urea was nearly one-eighth of the whole ounce; and, very remarkable to relate, it was found, both by the professor of chemistry (Dr. Ivison Macadam) and myself, that this sample contained 43·75grs. of sugar to the ounce of urine.

I am quite willing to admit that much has to be done before the true nature of this disease can be clearly ascertained, but I do object to such strong statements as those made by Professor Axe, when he says:—"It has already been rendered obvious that the teachings of the present day are based on purely theoretical grounds, and rest rather on physiological possibilities than on pathological data."

With regard to the term "Azoturia," I have only to state that it was the best I could give the disease. Fault is, however, found with it, both by Professor Axe and Professor Walley, the latter of whom did not even suggest a substitute, whilst the former terms it Acute Convulsive Hæmatinuria—a term which throws no further light on the pathology of the disease than Azoturia; they are both simply the names of a symptom or symptoms, Azoturia, however, being sufficient to describe the condition of the urine, whether it contains albumen or not.

The professor then handed round a specimen of very beautifully-prepared crystals of nitrate of urea, containing over 60 grains, obtained from an ounce of urine several years ago, and which he said was perfectly free from albumen. He then made some practical remarks on the treatment of the disease.

LIVERPOOL VETERINARY MEDICAL ASSOCIATION.

THE seventy-eighth quarterly meeting of the above association was held in the Medical Institute, Hope Street, Liverpool, on the 8th February, the President, R. S. Reynolds, Esq., in the chair. There were present:—Messrs.

Moore, Leather, Davey, Edwards, Storrar, Bell, Kenny, Locke, Woods, Whittle, Pielkington, Elam, J. Leather, Morgan, Kitchen, Welsby, W. A. Taylor, and the Secretary. Letters for non-attendance were received from Messrs. Fleming, Greaves, Faulkner, Lloyd, and P. Taylor.

The minutes of the last meeting being read and approved,

The TREASURER read the annual report.

Mr. WHITTLE moved, and Mr. W. LEATHER seconded, that the report be adopted (carried).

The SECRETARY proposed, and Mr. WOODS seconded, that Mr. Geo. Morgan, of this town, be supported by the members of this association for one of the forthcoming vacancies in the Council of the R.C.V.S.

Proposed by Mr. ELAM, and seconded by Mr. LOCKE, that the President, Secretary, Messrs. Moore, Leather, and Elam form a committee to ensure his return; and co-operate with the Midland Counties, Lancashire, and Yorkshire societies, for that object.

The PRESIDENT commenced his inaugural address by thanking the members for having unanimously re-elected him, and apologized for the mediocrity of the remarks he was about to make, on the plea that so little affecting the interests of the profession had transpired since he had the honour to address them a year ago. He deplored the apathy of members of the immediate neighbourhood towards gatherings of professional interest, pointed out that the absentees were the greatest losers by their indifference, and exhorted each member to exercise his energies for the promotion of a free interchange of thought upon subjects appertaining to veterinary science, and encouraged all to cultivate a kindly and generous feeling towards their rivals in practice. He next glanced at the working of the society during the past year, and feelingly alluded to the loss sustained by the death of the late Mr. Tom Taylor, of Manchester. In reviewing the discussion which took place at the previous quarterly meeting upon "the treatment of sidebone" and the "operation of docking," the President said he purposely allowed the discussion greater latitude than was admissible by the ordinary rules of debate, for he felt that important issues were involved which, at no distant date, would demand either the complete submission or the determined opposition of practitioners to the will of one or two magnates who appeared to have risen to be the dictators of the working body. The question of alleged cruelty in the performance of legitimate operations, by qualified men, was more fitted to occupy the attention of a general meeting of the profession than an association of this kind, whose functions should, for the most part, be confined to a consideration of pathological subjects rather than to professional politics and ethics. He next directed attention to a threatened usurpation by a few medical men of functions which could be most effectually dealt with by veterinarians, and quoted a resolution upon the "public milk supply" originating from the Medical Officer of Health of an adjoining borough, and which had been subsequently adopted by no less a sanitarian than the eminent surgeon, Mr. Ernest Hart, of London. The speaker did not, however, believe that so long as our profession showed themselves capable of thoroughly negotiating this and kindred subjects of public necessity, there was any fear of losing the ground already gained; but rather that although the blows of the reformers might be aimed at us, they would be more likely to fall upon the heads of those incompetent officers appointed by many rural and some urban authorities, to a duty that can only be well performed by men of education and skill in veterinary matters.

With reference to Foot-and-mouth Disease, the PRESIDENT said:—"An absorbing topic involving alike the interests of farmers, veterinary surgeons, and the meat-consuming population, is the eradication of Foot-and-mouth

Disease. Notwithstanding the severe, and in some cases embarrassing, orders issued by the Privy Council, with a view of arresting the spread of this essentially infectious disease, its extension has been such that any one who has given serious consideration to the subject must have been forced to the conclusion that the powers already possessed, whilst being sufficient to limit its propagation, are impotent to ensure its elimination from the country. On the one hand it seems clear that breeders and graziers cannot be required to submit to increased restrictions, and it is equally evident that so long as any virus remains in the country it will at some time or another become manifested by renewed outbreaks of the malady. The similarity between Cattle Plague and Foot-and-mouth Disease begins and ends in their being imported and equally infectious. It is quite improbable that the dreaded Rinderpest will ever again obtain any lengthened hold upon our herds, and it may be reasonably argued that if compulsory slaughter, associated with other severe precautions, of animals attacked with the less fatal Foot-and-mouth Disease had been adopted with equal energy upon its primary introduction into this country, the practice would have been attended with an equally satisfactory result; but the golden moment has gone, and we have to deal with a virus almost universally diffused, and the duration of whose vitality is undetermined. The abstract circumstance that Foot-and-mouth Disease is only very rarely fatal is, to my mind, no inconsiderable factor in the dissemination of the malady, for the reason that each affected beast, being a perfect centre of infection, lives to throw off incalculable particles of virus to be dispersed in all directions. Another reason why the disease is so tenacious is that, unlike most maladies of similar kind, an original attack confers only partial immunity from a second.

"The attitude of agriculturists, who are the primary sufferers from the ravages of animal plagues, is that an interdiction should be placed upon the importation of live animals, or that importation should only be conducted under restrictions which, if not absolutely impracticable, would be attended with enormous difficulty and consequent expense. Those farmers' associations who have debated the question have regarded it on one side only, or at least their view of it has been limited by individual interest. When they propose to deal with the matter as one of meat supply, and advocate the establishment of a carcase-trade only between Great Britain and Ireland, they have closed their eyes to the fact that there is bred and reared to three years old, in the island across St. George's Channel, more store stock than can be got ready for the butcher, and which have to be sent over in thousands, to be finally prepared in the feeding marshes and pastures of England and Scotland during summer; or to be fatted upon the root crops of our eastern and Midland counties in the winter months. On the other hand, a large proportion of English land is unsuited to stock breeding; and if no supply from an extrinsic source was available to consume the surplus products of our cultivation, how would farmers be able to obtain a sufficient supply of store stock? Some estimate of the magnitude of the trade that is carried on between this country and Ireland may be formed when I tell you that at the port of Liverpool, during the six weeks of last autumn, when some local authorities of the eastern counties required a certificate of health of imported animals consigned to their districts from the port of embarkation, no less than 7,700 head of store cattle were submitted to veterinary examination.

"Having glanced at the agricultural aspect of the question, I shall pass over the consumer's arguments *pro* and *con*, because problems of political economy can only be solved by persons specially skilled and experienced in dealing with such matters, to a consideration of what should be the function and duty of the veterinary profession in combating the subject. The disease

is such a common everyday thing that we are wont to give it little thought beyond what is necessary for the performance of our routine duties in connection therewith; and yet we equally well know, upon undisputed authority, that the losses and deterioration it has caused exceeds that of any other disease to which cattle are liable. That the Privy Council is excellently well advised upon the contagious diseases of animals you will agree with me; and that the difficulties with which the Veterinary Department of the Government is beset, in their endeavour to meet the many conflicting interests, must be excessive; and, also, that very great credit is due to our lawgivers and their consultant officers for the excellence of their provisions and the very satisfactory results that have obtained therefrom. But it is rather to the attention of the profession, as a body, and especially to the scientific workers of that body, that the subject should be directed. What those foreign scientists—Pasteur, Colin, and Chauveau—have by scientific experimental research achieved in rendering absolutely harmless such formidable diseases as Charbon and the Cholera of Poultry, surely our Williamses, McCalls, and Flemings can, or ought to, accomplish for the relatively benign Foot-and-mouth Disease. It is not for me—an ordinary practitioner—to foreshadow the lines upon which experimental inquiry, necessary to accomplish the desired object, are to be drawn; but I do believe and prophesy that the only practical way of reducing to a minimum the devastations caused by Bovine Eczema will be to diminish the potency of the malady by inoculation—mayb erequiring to be periodically repeated—with virus attenuated by cultivation. You will recollect that last year I directed your attention to the practice of animal inoculation for the subjugation of fatal germ diseases on the Continent; and I am desirous now to impress upon you my full conviction that it is by some modification of this process that the British stock-owner must seek for relief from the ill consequences of Foot-and-mouth Disease. That such can be accomplished, I feel certain; that it is not very difficult, I believe; and that, too, in defiance of the obstruction which the Vivisection Act appears to offer to its consummation; that the reward of the discoverer of the successful plan will be immense, and that his name will descend to posterity as a public benefactor, no one will doubt."

The PRESIDENT brought his address to a conclusion by giving a brief summary of the recent experiments abroad, in relation to inoculation for the suppression of contagious diseases.

An animated discussion ensued, in which most of the members present took part.

In the absence of Mr. Ross (who had promised to introduce the subject of Soundness in Horses), Mr. W. A. TAYLOR brought forward the question of Unsoleing Horses, etc., which was well discussed.

A vote of thanks to the President, and another to Mr. Taylor, then terminated the meeting. ALEX. BAIN, *Hon. Sec.*

ANNUAL MEETING OF SCOTTISH VETERINARY ASSOCIATIONS.

[The following report is from an Edinburgh newspaper, the detailed report arriving too late for insertion this month.]

THE second annual meeting of the Scottish Metropolitan, West of Scotland, and Scottish Central Veterinary Medical Associations was held on February 22nd, at the Waterloo Hotel, Edinburgh, when there was a large attendance of members. Mr. C. Philips, Army Veterinary Department, the retiring president of the Metropolitan Society, delivered up the chair to the newly-elected president, Principal Walley, and Mr. R. Rutherford also delivered up his office as secretary to Professor Lewis. Some formal business was

transacted, and a report was received as to a memorial which was presented by the conjoint Scottish societies to the R.C.V.S. regarding the representation of Scotland in the Council. The memorial recommended the adoption of a new system in the election of members to the Council of the Royal College of Veterinary Surgeons, a reply to which had been received to the effect that the charters of the College did not empower the Council to alter the mode of election. Mr. C. Cunningham, who presented the report, pointed out that the Council had already altered the mode of election from a show of hands to voting by circular. He thought that the memorial deserved other treatment at the hands of the Council, and added that there were two courses open to the Scottish societies; they might make another attempt to obtain a separate charter for Scotland, or they might undertake long journeys to London and try to reform the Council. The Chairman asked that the discussion of this question might stand over until after the delivery of his address. He pointed out that any alteration in the mode of voting would probably require fresh legislation. Proceeding to deliver his inaugural address, Principal Walley referred to the great strides which the profession had made during the last fifteen or twenty years. On the question of the value of docking horses' tails, he looked upon the operation as very necessary, but thought that it might be performed early in life, and that there was no need for the use of the cruel cautery. Principal Walley then passed in review a great number of subjects of interest to the veterinary profession, touching on the operation of the new Veterinary Act, the relation of the schools to the R.C.V.S., and the constitution and influence of the present Examination Board. He entered into a defence of the veterinary schools, and of the action taken by the professors in endeavouring to secure the best interests of their pupils, expressing a hope that the fashionable system of cavilling at the schools would fall into desuetude. In the discussion which followed the reading of the president's address, Principal Williams pointed out that a new charter would be required by the College in two years, and he thought that at that time they would be in a very good position to carry their reform with reference to the mode of election. Principal M'Call opposed any attempt being made to secure a separate charter for Scotland, in the belief that they might reasonably hope to succeed in obtaining a larger share of representation on the Council. Mr. Pottie thought there was no hope that they would get anything from the College, and that they would have to go in for a new charter. At the same time, he thought they ought to wait for two years, until a new charter was obtained, and if then their claims were ignored, let them agitate for a separate charter. Other speakers who followed expressed a strong opinion in favour of some action being taken to secure a juster representation for Scotland in the Council. Mr. Greaves, of Manchester, a member of the Council, said that when the memorial was placed before the Council it met with a fair and candid reception; but in order to comply with its request a new charter would have to be obtained. For that charter he would vote. Mr. Cunningham proposed that energetic action be taken at once, and that Principals Walley, Williams, and M'Call be nominated as candidates for the Council. Mr. R. Rutherford seconded. He thought that the Principals of Colleges ought to be *ex-officio* members of the Council. A further motion was carried that the conjoint Scottish societies should amalgamate with the societies of the North of England for the purpose of carrying the candidates nominated, in conjunction with Mr. Stevenson, of Newcastle, the nominee of the North of England. The assembled members of the three societies afterwards sat down to dinner, to the number of about seventy. Principal Walley, who presided, was supported by Bailie Anderson, the Rev. Mr. Overend, Principals M'Call and Williams, Professor M'Queen, and Messrs. Philips, A.V.D., 3d Dragoons; Nicholson, 3d Dragoons; Archibald Baird, Scots Greys; Greaves, Manchester; Macgregor, Bedlington; Hunter and Smart,

Newcastle ; and Mulvey, Bishop Auckland. After the usual toasts, Mr Spreull proposed the toast of the "Royal College of Veterinary Surgeons," which was responded to by Mr. Greaves, who said he should be glad to see a greater number of Scotsmen in the Council than there were at present. The matter rested in their own hands, and they might obtain a greater share in the representation of the Council if they would only shake off their apathy, and agitate as the men of Lancashire had done twenty years ago. The remaining toasts were "The Sister Profession," proposed by Professor M'Queen, and responded to by Dr. Hunter; "The Highland and Agricultural Society of Scotland," proposed by Mr. Borthwick, and replied to by Mr. Connachie ; "The Lord Provost, Magistrates, and Town Council," proposed by Principal M'Call, and replied to by Bailie Anderson ; "The Scottish and Kindred Veterinary Medical Associations," proposed by Principal Williams, and replied to by the presidents of the different associations ; "The Benevolent and Mutual Defence Association," proposed by Mr. Pottie, and replied to by Mr. Greaves and Mr. P. Taylor; "The Board of Examiners," proposed by Mr. Cunningham, and replied to by Mr. A. Robinson ; "The Schools," proposed by Bailie Anderson, and replied to by the Principals ; and "The Visitors."

ROYAL AGRICULTURAL SOCIETY.

AT the Monthly Council Meeting, held on March 5th, Mr. Dent reported that the Committee had received the following letter from the examiners appointed by the Royal College of Veterinary Surgeons, in accordance with which they recommended that the medals of the Society be awarded to Mr. J. G. Parr, St. James's Road, Leicester, and Mr. W. H. Bloye, 8, Westminster Terrace, Mutley, Plymouth :—

To the President and Council of the Royal College of Veterinary Surgeons.

GENTLEMEN,—We have the honour to report that, having examined, in April, 1883, both practically and theoretically on the diseases affecting the animals of the farm other than the horse, Mr. J. G. Parr and Mr. W. H. Bloye, the only two candidates for the diploma of the Royal College of Veterinary Surgeons who, since the last award of the prizes given by the Royal Agricultural Society of England, have obtained sufficiently high marks to entitle them to the medals now offered by that Society, we consider Mr. Parr worthy of the first and Mr. Bloye of second place, and recommend that the medals should be so awarded.

WILLIAM DUGUID.
CHAS. GRESSWELL.

This report was adopted.

NATIONAL VETERINARY BENEVOLENT AND DEFENCE FUNDS.

LIST OF SUBSCRIPTIONS FROM MARCH 9TH, 1883, TO MARCH 9TH, 1884.

1883.		£	s.	d.
March	14. T. Hopkins	1	1	0
April	8. C. Sheather	1	1	0
,,	16. T. D. Lambert ...	1	1	0
,,	16. G. H. Darwell ...	1	1	0
,,	20. B. Cartledge	0	10	6
,,	20. F. Riddler	1	1	0
,,	20. E. Woodger	3	3	0
,,	20. J. Leather & Son ...	2	2	0
May	5. Wm. Dobie	1	1	0
,,	12. Professor Williams..	1	1	0
,,	12. S. Locke...	1	1	0
,,	17. A. H. Darwell ...	1	1	0
June	15. J. L. Barling	0	10	6
,,	15. Professor Walley ...	0	10	6
,,	15. A. Lawson	1	1	0
,,	15. J. Lawson	1	1	0
July	7. D. R. Sowerby ...	0	10	6
,,	14. G. Oliver	1	1	0
,,	18. G. Oliver	5	0	0
,,	21. Thos. Barker... ...	6	1	0
,,	26. W. A. Field	0	10	6
Aug.	5. A. Bain	6	1	0
,,	5. John Brizzell	6	1	0
Oct.	25. John Howard... ...	0	10	6

			£	s.	d.
Nov.	29.	G. Ball & Son ...	2	2	0
,,	30.	James Martin... ...	1	1	0
Dec.	9.	J. M. Stanley... ...	3	3	0
1884.					
Jan.	1.	T. Proctor	1	1	0
,,	2.	R. Reynolds	1	1	0
,,	2.	B. Cartledge	0	10	6
,,	2.	J. Rowe	1	1	0
,,	2.	Wm. Carless	1	1	0
,,	2.	John Marksham ...	0	10	6
,,	3.	W. H. McCaldon ...	2	2	0
,,	3.	J. C. James	0	10	6
,,	3.	E. Nuttall	0	10	6
,,	3.	P. E. Rothwell ...	1	1	0
,,	3.	C. Sheather	1	1	0
,,	7.	Wm. Bower	1	1	0
,,	7.	G. Cave	0	10	6
,,	7.	J. J. & J. Freeman .	1	11	6
,,	7.	W. T. Peacock ...	1	1	0
,,	7.	Sir F. Fitzwygram...	1	0	0
,,	7.	G. Oliver...	1	1	0
,,	7.	G. Newsome	0	10	6
,,	7.	Hy. Thompson ...	1	1	0
,,	7.	A. H. Santy	1	1	0
,,	9.	F. G. Sampson ...	1	1	0
,,	9.	T. G. Chesterman...	1	1	0
,,	9.	R. C. Edwards ...	0	10	0
,,	9.	T. W. Wragg... ...	1	1	0
,,	9.	T. Gregory	0	10	6
,,	11.	R. Cox	1	1	0
,,	11.	E. Meek	1	1	0
,,	12.	J. D. Overed	0	10	6
,,	15.	G. Warnaby	0	10	6
,,	15.	H. S. Withers ...	1	1	0
,,	16.	Wm. Whittle	0	10	6
,,	16.	Hy. J. Cartwright & Son...	2	2	0
,,	16.	C. Morgan	1	1	0
,,	17.	Thos. Collins... ...	0	10	6
,,	17.	F. T. Stanley... ...	1	1	0
,,	18.	R. C. Triggar ...	1	1	0
,,	18.	Thos. Barker	1	1	0
,,	18.	T. E. Angers	1	1	0
,,	19.	J. Brizzell	1	1	0
,,	19.	F. Danby	0	10	6
,,	19.	E. Woodger	1	1	0
,,	19.	T. D. Broad	1	1	0
,,	21.	C. Crowhurst... ...	0	10	6
Jan.	21.	Rd. Roberts	1	1	0
,,	26.	Hy. Olver	0	10	6
,,	26.	E. Beddard	1	1	0
,,	26.	H. Blunt...	1	1	0
,,	26.	A. Over	0	10	6
,,	26.	H. W. Caton	1	1	0
,,	26.	J. B. Taylor	1	1	0
,,	26.	O. J. Hill	1	1	0
,,	26.	H. M. Stanley ...	1	1	0
,,	26.	F. Blakeway	1	1	0
,,	26.	Capt. B. H. Russell	0	10	6
,,	26.	H. J. Goodall... ...	1	1	0
,,	26.	S. H. Withers ...	1	1	0
,,	30.	E. H. Leach	0	10	6
,,	30.	H. Hogben	0	10	6
,,	30.	W. A. Field	0	10	6
Feb.	2.	H. T. Batt & Son ...	2	2	0
,,	2.	Wm. Cawthorn ...	0	10	6
,,	2.	J. Scrivens	0	10	6
,,	2.	S. Locke...	1	1	0
,,	2.	M. Pratt	1	10	0
,,	2.	Wm. Broughton ...	0	10	6
,,	2.	J. Bale	0	10	6
,,	2.	Parline Walker ...	0	10	6
,,	2.	J. H. Ferguson ...	0	10	6
,,	2.	Professor Williams .	1	1	0
,,	2.	Peter Walker... ...	0	10	6
,,	2.	Philip Deighton ...	0	10	6
,,	5.	Edwin Faulkner ...	1	1	0
,,	5.	G. H. & J. Pyatt ...	1	1	0
,,	5.	H. R. Perrins ...	1	1	0
,,	5.	J. Woodger	1	1	0
,,	7.	J. B. Wolstenholme.	1	1	0
,,	11.	T. D. Lambert ...	1	1	0
,,	11.	T. Aubery	0	10	6
,,	11.	C. Moir	0	10	6
,,	24.	J. W. Anderton ...	0	10	6
March	2.	J. S. Carter	0	10	6
,,	3.	Thos. Secker	0	10	6
,,	7.	Thos. Greaves ...	1	1	0
,,	7.	G. Morgan	1	1	0
,,	7.	A. Bains...	1	1	0
,,	8.	C. W. Elam	1	1	0
,,	10.	Thos. Briggs	2	2	0
,,	11.	Peter Taylor & Son	2	2	0
			£131	13	6

The Veterinary Mutual Defence Fund, 1884.

Cash Received.	£	s.	d.
Balance in Bank, March 9th, 1883	103	2	10
Subscriptions from 9th March, 1883, to 11th March, 1884..	131	13	6
Bank Interest, June 23rd, 1883 ..	2	14	9
,, ,, December 24th, 1883	1	3	7
	£238	14	8

Cash Paid.	£	s.	d.
Balance this day in Bank	230	11	2
Amount overpaid into Bank by Treasurer at last Balance	6	8	0
Balance in hand	1	15	6
	£238	14	8

March 11th, 1884.

Audited and found correct,
John B. Wolstenholme.
Thomas Greaves, *Hon. Treasurer.*

The National Veterinary Benevolent Fund, 1884.

1883. CASH RECEIVED.	£	s.	d.
Invested in Birkenhead Docks ..	1,300	0	0
,, ,, ..	600	0	0
Cash in Bank, March 9th, 1883 ..	5	19	11
Bank Interest, June 23rd, 1883 ..	1	0	7
Mersey Dock Coupons, July 10th, 1883	25	7	6
Subscriptions, July 24th, 1883 ..	6	1	0
Mersey Dock Coupons, October 1st, 1883	12	11	6
Bank Interest, December 24th, 1883	0	5	0
1884.			
Mersey Dock Coupons, January 11th, 1884	25	9	2
Subscriptions, January 10th, 1884 ..	1	0	0
	1,977	14	8
Cash overpaid into Bank	3	6	2½
	£1,981	0	10½

1883. CASH PAID.	£	.	d.
August 14th.—Cash to the widow and children of the late Mr. Alfred Rushall	5	0	0
August 24th.—New Receipt Book ..	0	6	6
September 8th.—Brown's two orphan children	10	0	0
December 31st.—Wrappers for Circulars	0	11	4
1884.			
January 7th.—Wrappers for Circulars	0	5	8½
January 26th.—The widow and children of the late Mr. Alfred Rushall	5	0	0
March 5th.—Do., do. ..	5	0	0
,, 9th.—Secretary's Expenses, Printing, Postages, etc.	2	2	8
March 9th.—Dock Bonds	1,900	0	0
,, ,, Cash in Bank this day	52	14	8
	£1,981	0	10½

March 11th, 1884.

Audited and found correct,
JOHN B. WOLSTENHOLME.
THOMAS GREAVES, *Hon. Treasurer.*

Obituary.

The Secretary of the Royal College of Veterinary Surgeons reports the death of Mr. Samuel Gill, Hastings, who graduated in 1870.

The death is announced, on the 24th March, at 160, Brech Road, Liverpool, of Mr. Andrew Galbraith Ross, Vet. Surgeon 1st class, late Scots Greys; aged forty-four.

Army Veterinary Department.

By command of Her Majesty, His Royal Highness the Prince of Wales held a *levée* at St. James's Palace on March 18th, when Inspecting Veterinary Surgeon James D. Lambert was presented by General Lord Wolseley, Adjutant-General to the Forces.

At the battle with the Soudanese Arabs, fought at El Teb on February 29th, Veterinary Surgeon Beech was wounded. Veterinary Surgeons Clayton, Thomson, and Beech are serving with the troops in the Soudan.

The following veterinary officers have proceeded to India for service in that country since the commencement of the trooping season:—Cooper, Ringe, Rayment, Matthews, Ewing, Blenkinsop, Appleton (A. F.), Pottinger, Hazleton, Twiss, Braddell, Raymond, Waddell.

The following officers having completed their tour of Indian service, return to the Home Establishment:—Appleton (W.), Webb, Queripel, Skoulding, Plomley, Burton, Davies, Gillespie, Bostock.

Veterinary Surgeons Dawson and Powell are home on sick leave from India. Veterinary Surgeons Bennett and Smith are serving in Lower Egypt, and Duck and Rutherford in South Africa.

Parliamentary Intelligence.

House of Commons, March 7th.

ARMY VETERINARY DEPARTMENT AND TRANSPORT AND COMMISSARIAT SERVICES.

ON the motion for going into Committee of Supply,

Dr. CAMERON rose to call attention to the cruelty, waste of money, and danger to British arms in recent campaigns caused by the defective organization of the Indian and British Transport and Commissariat services, and to move, "That a Select Committee be appointed to inquire into the working of the Commissariat and Transport services of the British and Indian armies in the recent Egyptian and Afghan campaigns, and to consider what changes, if any, are required to secure increased efficiency in those services." He said that there never was a war which more completely proved the incapacity of the Transport and Commissariat Departments than that in which we were now engaged. Dr. M'Dowall, now engaged with our forces, had stated that the Transport was so insufficient that it would break down if casualties happened even to 300 of our men. If that were so, it was obvious that the most glaring faults of the last campaign were being repeated. At that time mules were being purchased, but not by the Transport Department, although the Commissary-General was responsible for the inspection of the transport service. The mules were purchased and shipped in such an unskilful manner that out of 1,100 two-thirds were unfit for work when landed. They were bought contrary to the advice of the veterinary surgeon who was sent out with the officer whose duty it was to purchase them—an officer who did not belong to the Transport and Commissary Department—and on the voyage, which lasted nine days, from Smyrna to Ismailia they had nothing but chopped straw to feed upon. Some of the mules were shot or sold, and the rest were got to work in a week or fortnight after they were landed, so that at the precise juncture when their services were most needed they were not to be had. (Hear, hear.) The animals were not got to work until the war was almost over. A large quantity of hay was landed in such a musty condition that it had to be used for bedding. The Commissary-General was not consulted about the hay any more than he was with regard to the mules, and the handling of the stores on the ships was left entirely to the Admiralty. It was the entire system that was at fault. What he wanted was an independent inquiry into the system of "divided responsibility and no one to blame." The question he had to ask was, had any of the recommendations based upon the experience they had had in Egypt been carried into effect, or was the Commissariat and Transport Department in the same unworkable condition? (Hear, hear.) If he obtained a committee, he was prepared to prove every fact he had stated. (Hear, hear.) He would now come to the Afghan war. *The Times* Correspondent at Simla, in a telegram dated June, 1879, stated that the force for some time was so helpless, owing to the want of transport, that it could not have advanced to Cabul. In March of the same year, an officer of high rank spoke of the delay caused by the great mortality among the transport animals; and Mr. Charles Williams, an experienced war correspondent, stated that in consequence of the impossibility of bringing up food, the native troops had to be put on half rations, and that 700 camels died in a week. Mr. Duke, in his work on the Afghan campaign, stated that in the Kurum Pass the great difficulty was want of transport; and the correspondents he had quoted said that over and over again the columns could not move for want of transport. If camels were to be used at all it was only strong and adult camels that could be relied upon; but most of the camels

were incapacitated by youth or age; and ponies that were barely able to drag themselves along were all bought up. Putting aside the horrible cruelty and the direct loss, the indirect loss would be felt for many years in agricultural districts. It was stated that in the opinion of the civil authorities in the first three months one-third of the available transport was used up. While there was elaborate veterinary organization among the British forces, it was wanting among the Indian troops. An officer in high command wrote that the losses in camels at the front were not surprising, caused by the absence of veterinary officers; he had asked for them, but Government would not sanction the expense; the result was that thousands were being wasted through rascality and ignorance; in one case out of seventy camels, twenty-six were but two years old, and others were either suckling calves or were otherwise in a condition that rendered them unfit for work. The transport officers were chiefly taken from infantry regiments, and were ignorant of all subjects appertaining to animals; and there was not a single veterinary surgeon to look after thousands of bullocks, mules, etc. His informant added :—"I have reported all this officially, and there will be investigation, but the Government is sure to burke the whole thing." Of course, the facts had been burked, but he wanted to bring them to light for the sake of the efficiency of the service in the future, because nothing was being done in India to prevent a recurrence of this scandal. Horrible and incredible as the statements made were, he believed they would all be substantiated before a committee. In the Kurum column, out of 6,000 animals 40 per cent. were reported as being either too young or too old, or in other respects incapable of doing the work of the campaign, and it was a sheer waste of public money to buy them. Everywhere there were the same complaints of the large proportion of unfit animals that were bought for the transport service. In one instance out of 400 ponies 395 were deemed utterly unfit for the work. When animals were bought under proper veterinary supervision the fact was apparent in the rejection of no more than 5 per cent.; but the Indian authorities treated such supervision with supreme contempt. The idea seemed to be that the veterinary surgeons would select only first-class animals, and that all that was required was a number of animals that would carry their loads a certain distance. Accordingly, purchases were made without discrimination, animals were sent to the front, many of them died miserably on the way, and we lost not only the sum spent in purchasing them, but the value of their loads as well. This involved not only cruelty to the animals, but the deception of the General who trusted to them. There was no improvement as the war went on, and things were as bad at the end as at the beginning. It was estimated that we lost 60,000 camels and 30,000 other baggage animals, and one-half of the loss was caused by the fact that they were utterly unfit for the work when they were bought. In camels alone the loss from this cause probably exceeded half a million; and directly and indirectly the loss must have been many times that amount. The cruelty and suffering were everywhere described as atrocious. The animals were principally in the charge of ignorant natives, who knew nothing of their diseases and who were careless to a degree. Diseases were rife among them, and no precautions were taken to prevent the spread of contagious diseases. Every elephant in the Kurum column got the Hoof-and-mouth Disease, and in some cases the soles of their feet slipped off, carrying the nails with them. No provision was made for shoeing animals; there were no shoes, no nails, no workmen. No care was taken to prevent sore backs; there were no medicines, dressings, or instruments. It was with difficulty veterinary surgeons could get canvas to put over wounds to prevent them festering. The sore backs sickened experienced veterinary surgeons; the ribs were laid bare and the flesh was mortifying while the asses were being driven, and when they were shot and fell the

tissues of the back gave way. A gentleman counted 300 camels lying on one side of the Bolan Pass and 200 on the other; and in some instances before they were dead the ravens were picking out their eyes. The same mismanagement existed from the beginning to the end of the war, and it was repeated in the Egyptian war. Since the lesson in Afghanistan it would hardly be credited that the Indian Government, which was not usually very economical, had been guilty of cutting down their veterinary staff by one-third. He did not now propose to offer any suggestions as to how the state of things that he had described should be remedied. He could quote a number of what appeared to be common-sense suggestions, but what above all was required was a knowledge of the facts and of the extent of the evil. (Hear, hear.) If the committee he asked for was appointed, it would have no difficulty in finding a number of competent men to make suggestions; but he would much rather trust to the common sense of a committee of that House for the reform of such evils as he had that evening endeavoured to lay bare, than to the expert consideration of a departmental committee. The hon. member concluded by moving his resolution.

Mr. PULESTON, in seconding the motion, remarked that his hon. friend the member for Glasgow deserved thanks for bringing forward a matter of great importance and practical utility and one vitally concerning the interests of the nation. If but one quarter of the statements and statistics given to the House by his hon. friend were true, even then it was difficult to conceive how the Government should hesitate for a moment to grant the committee now asked for. The country would regard it as extraordinary if the proposed inquiry were withheld, in face of the startling and shocking facts presented to the House by his hon. friend, who had stated on his own responsibility that he would bring before the committee abundant testimony to the correctness of every statement he had made. His hon. friend had referred to the war in Afghanistan. In that case Bombay was forced to supply camels and other baggage animals, and had to do it in a very haphazard sort of way, scouring the whole of Scinde for everything. Within three or four months after that the whole of the beasts of burden in Scinde were destroyed. We had devoted ourselves to purchasing camels which were too young and which were not animals suited for the purposes of frontier war. Not only had this loss of money been knowingly and willingly incurred, but it had been an utterly useless sacrifice; the public interest had not been advanced by the expenditure; on the contrary, human life would absolutely have been saved by the practice of economy. As regarded the supply of mules, the best thing would be for the Government to breed them in India. It might be urged against this that we should have to keep them in times of peace; but they might be let out to the cultivators of the soil, and the Government would have them when they were in need of them. Thus the breeding of mules would entail no loss whatever on the Government; while in times of famine it would be found of the greatest importance to have mule trains. Thus the keeping of mules would not be a luxury, as it had been described, but a source of profit. With regard to the loss of transport animals by General Stewart's column, not only had there been the danger of being deprived of means of transport, but in one case 500 dead mules lay absolutely polluting the air and water and imperilling life. In Egypt, again, he thought that we had been very fortunate in being victorious at Tel-el-Kebir, for such had been the state of affairs that we could not have remained there much longer without starvation and the difficulties of transport operating against us. As it was, the want of transport had locked the troops up here and there, not to speak of the great loss of stores incurred. Gatlings were no use unless properly horsed, but in Egypt any tagrag and bobtail out of the camp followers had been appointed to look after the horses. This question of transport and commis-

sariat was one of deep interest, not only to the Army itself, but to the country; and he hoped that the Government would grant this Committee of Inquiry; by so doing they would have the credit with the public at large of acting in the interests of the nation. (Hear, hear.)

Mr. CROSS said he would not discuss whether the Afghan war was a party question or not, but would first answer the hon. member for Glasgow with reference to the Afghan campaign. The facts of the case were much as they had been brought to the attention of the House. After the first Afghan campaign the transport material had been dispersed, and when the necessity arose again, there had been very little transport on hand, and it had had to be found very rapidly. He would quote a report made by Sir M. Kennedy on this subject. Sir M. Kennedy said:—

"With regard to the Commissariat and Transport, this state of things was very undesirable; the disadvantages it involved were not unrecognized or under-estimated; but it could not always be avoided if the operations were to be carried through at all. It was a race against time. The railways poured troops and supplies to the front, and it was absolutely necessary for political, military, and even for economical purposes to strike quickly. And nothing was ready at the commencement."

Dr. CAMERON rose to a point of order. The hon. member having quoted a report, he would ask whether it should not be laid upon the table.

The SPEAKER: The hon. member, having quoted from it, no doubt will lay the report on the table.

Mr. CROSS said that he intended to do so. The report proceeded to state:—

"The amount of material that these considerable demands from first to last involved for forces, that numbered in the aggregate 42,600 fighting men, 40,000 followers, and 72,000 animals, was very great, even when it is taken into consideration that the troops would necessarily depend to some considerable extent on the natural produce of the country, and, like all armies operating in advance of a distant base, would be compelled to draw bulky articles, such as grain and forage, from the districts occupied. There was, however, some occasional difficulty in obtaining local supplies, but it never lasted long or pressed very heavily, and the troops and followers never for a day suffered any want or inconvenience, although animals were occasionally on short rations."

That was the report of Sir M. Kennedy, referring to the second period of the Aghan war. In the first period it became necessary to arrange the transport very quickly, and troops had to be moved very quickly to the front. Tens of thousands of store and baggage animals, camels, mules, ponies, and bullocks, everything that could carry a shot or a tent pole, had to be collected on the instant, as it were; the demands were so imperative and the emergency so pressing that it was only natural that all kinds of animals should be swept into the net, and from the fact that efficient animals could not be had inefficient ones had to be accepted by the transport officers, even though it must have been known that a large number of them would fail. It should be remembered that when Sir Louis Cavagnari's mission was peacefully settled at Cabul the transport extra service used in the previous advance had been scattered and practically broken up, and on the renewal of the war its reorganization was placed in the hands of Sir M. Kennedy. From a report of Sir M. Kennedy on the supply and transport arrangements during the campaign in northern Afghanistan and the Kurum Valley in 1879–80, it is clear that "we had been caught in a state of unreadiness and everything had to be improvised." We were evidently without experienced transport officers and transport service. It was arranged to separate transport from commissariat —especially in the field—beyond the basis, and to place it, giving it a sepa-

rate organization, more closely under the general officers in command. This report of Sir M. Kennedy on the deficiency of transport was, perhaps, one of the most melancholy pieces of military reading ever published. As the war went on, Sir M. Kennedy seemed to have overcome all difficulty. Simultaneously with General Roberts's march from Cabul to Candahar, General Stewart returned to India, and on these two occasions the transport seemed to have been everything that could be desired. General Roberts marched from Cabul to Candahar by Ghazni, 10,000 men, 8,000 followers, and 8,400 transport animals. He traversed 313 miles in twenty-two days, fourteen and a half miles a day, and out of 8,383 transport animals there were only 1,050 casualties. General Stewart marched from Cabul to Peshawur with 9,559 transport animals, and there were only 1,023 casualties. The losses and troubles of the transport, especially during the second period of the Afghan war, had caused the Government of India to organize a regular Transport Department, based on a plan the result of experience gained during the second period, and the principle on which this plan was based was that a certain proportion of the Indian armies should be equipped with one half regimental transport. This force would embrace 46,000 men, of whom 24,000 would be stationed on the frontier. This transport would be distributed over a larger number of regiments than it would suffice completely to mobilize. This was done with the view to familiarize a considerable number of troops with the management of transport. Half this number, or about 23,000 men, could be put into the field within their respective districts, fully equipped with transport on the Cabul scale, without requiring any additional carriage. For this transport it was not proposed to employ officers of the British veterinary establishment; an experience of more than twenty-five years on the frontier had proved that regiments could be maintained in a state of perfect mobility, taking charge of their own transport establishment, and keeping it thoroughly efficient, without European advice, and there seemed to be no reason to question that similar results would attend similar means on a larger scale. To increase the number and efficiency of the Salootree class, the Government of India had recently established in Bombay, Bengal, the Punjab, and Burmah veterinary colleges, presided over by three eminent veterinary surgeons. Last year the Government of India proposed a reduction of the British veterinary establishment in India from seventy-three to forty-nine. Their reasons were the intended introduction for the horses of the British troops of the station, field, or present hospital system, which obtains for the men. Under this system the Government of India were satisfied that, while a smaller number of officers will be required, greater efficiency will be secured. The question of the establishment to be ultimately maintained and its organization had not yet been settled. No reduction had yet been made, and meanwhile the actual number of veterinary surgeons of the British establishment now employed in India was sixty-four—four administrative officers—namely, two Bengal, one Madras, and one Bombay. There were ten on staff duties—namely, six Bengal, three Madras, one Bombay, and forty-eight on station and regimental work—namely, twenty-six Bengal, ten Madras, seven Bombay, and there were two officers on furlough. This was fifteen in excess of the number proposed by the Government of India. The total number of horses with the British troops in India was 10,837 (including 1,001 mules belonging to British mountain batteries). If this number of animals was divided among the forty-eight veterinary officers engaged in station or regimental work, it gave about 225 animals per officer. The four regiments of Madras Native Cavalry were in charge of their veterinary officers, and they had 1,273 horses; so these gentlemen had now, on an average, about 300 animals each. The Bengal and Bombay Cavalry numbered 21,477, and it might

perhaps be that the man being owner of his horse, and therefore having a personal interest in its health, looked well after it. There was no doubt of the thorough efficiency of the Indian Cavalry; that efficiency was, he believed, clearly demonstrated in the Egyptian campaign, and though the veterinary hospitals of the Bombay and Bengal Native Cavalry never had been under British veterinary care, that was not supposed to have rendered them less efficient or economical, and, as at present advised, the Government of India had no intention of increasing the number of European veterinary officers in charge. The hon. member proposed to inquire not only into what had taken place in the Egyptian, but in the Afghan campaign also. The Indian officers had taken the Afghan campaign very much to heart, and therefore it was quite unnecessary to enter into that subject; indeed, he did not see how any inquiry in this country would help the Indian Government, while there was in India at the present moment a number of officers fully competent to manage the affairs of the army, and who had taken this report and examined it thoroughly, and come to certain conclusions upon it. (Hear, hear.)

Mr. BRAND said it was not so easy to meet the motion as the speech of the hon. member for Glasgow, in that the latter was replete with assertions based mainly on hearsay and having very little in the shape of fact to support them. As far as the Egyptian campaign was concerned, a committee presided over by Lord Morley had reported that there had been plenty of all things necessary for the health and comfort of the troops. After reading that report, he had come to the conclusion that the sufferings of the troops were those which were inseparable from active service in a hot climate. With regard to the conduct of the Veterinary Department, there was no doubt that the horses and mules had suffered greatly from the heat, the flies, and the sand, as well as from the want of water, while they had been sent on active service before they had had time to recover from their long sea voyage. But what, he would ask, would have been the condition of those animals if the Veterinary Department had not been thoroughly efficient, and if its members had not done their duty in a most admirable manner? (Hear, hear.) At the time when the cattle were landed several cases of Rinderpest broke out among them, but owing to the precautions of the principal veterinary surgeon, who had them inspected and the diseased animals slaughtered, the disease was prevented from spreading. The Glanders having broken out among one troop of the Bengal Cavalry, the principal veterinary surgeon ordered the infected animals to be destroyed and the remainder of the troop isolated, and thus this disease also was prevented from spreading. (Hear, hear.) It must, therefore, be taken that the Veterinary Department in Egypt was thoroughly well organized. The Government did not admit that there was any necessity for the proposed inquiry, but still some good might possibly arise from having the statements of the hon. gentleman verified or otherwise as the case might be. Therefore, on the understanding that this inquiry was to be confined entirely to the operations in the recent Egyptian campaign, and that it was also to be confined to the working of the commissariat and transport service—for the medical arrangements had already been inquired into by the committee over which Lord Morley presided—the Secretary of State for War would not oppose the motion. (Hear.)

The MARQUIS of HARTINGTON said it was desired that the work of the committee should be strictly limited to the two subjects mentioned, because it was thought the inquiry should be made as to definite and distinct objects, and should not wander over the whole ground of the Egyptian expedition. He did not deny that some good might come from an inquiry directed to the object of obtaining results from experience of the working of the system of our supply and transport in the field. The Medical Transport,

of course, formed a part of the transport of the Army, and could not be separated from it. He would only say, then, that in granting this committee he hoped it would be understood that the Government did not assent to a great many statements that had been made, and that still less did they admit that anything whatever had been proved as to any shortcomings on the part of individuals. All that was admitted was that perhaps the system might be improved. He thought the most convenient course on this occasion would be for the hon. gentleman to withdraw the motion he had made and to move it in the amended form.

Dr. CAMERON assented, and his original motion having been by leave withdrawn, the following motion was agreed to :—"That a Select Committee be appointed to inquire into the working of the Commissariat and Transport Services of the British Army in the recent campaign, and to consider what changes, if any, are required for increasing the efficiency of those services."

Jurisprudence.

A HORSE WARRANTY CASE.

(*Continued from page* 223.)

Mr. Dugdale then addressed the jury, and said it was a peculiar action, and he doubted whether there had been one like it before. The issue was, did the defendant use ordinary skill and care in his examination of the horse? It was not a question of mistaken judgment, but whether he had not brought reasonable skill to the practice of his profession. He should call some of the most eminent veterinary surgeons to speak to the condition of the horse. The defendant first became acquainted with this horse in July, and previous to the examination in question he treated and cured the horse of Thrush. Defendant was never told for whom the horse was examined, and it was a case of complete employment by Mr. Lutwyche. There was not a tittle of evidence to show that any contract existed between Barling and Walker. A contract required the consent of both parties. In this case no such evidence existed. Mr. Barling believed then, and now, that the horse was sound when he gave the certificate. Even one of the plaintiff's professional witnesses said the disease appeared to have existed only three or four months.—The defence set up was that the horse was apparently sound on the day the certificate was made, and that in his examination defendant acted with ordinary skill and care. It was also objected that defendant was responsible only to Mr. Lutwyche, and not to plaintiff, of whom he knew nothing at the time ; and that plaintiff had himself an opportunity of seeing if the horse was at all lame. Several experienced veterinary surgeons were examined, who supported the defendant's contention that the horse might have been sound at the time of the examination, and some of them declared that the horse was at present free from navicular disease.—Mr. G. L. Barling said he examined the horse on the 5th October. He was very careful in his examination ; watched the horse in the stable. There was no "pointing." Had him trotted and ridden on pavement ; then galloped in the field, and rode himself on stones ; then put him into stable half-an-hour ; again trotted on pavement, and he went quite sound. Examination occupied about one hour.—The head groom and under groom of Mr. Lutwyche gave evidence that they had had the horse under their care from July to 6th October. The horse had never been blistered during that time.

In August he had a thrush in off frog, but got quite well in a fortnight. They had ridden him two hours a day exercise up to the day he went away, and he went quite sound.—Mr. Greaves, Manchester, late President of the Royal College of Veterinary Surgeons, and now Fellow of that College, been fifty years in practice, said he examined the above horse on the 2nd February. The horse did not "point;" no heat in his feet; no alteration of structure; one foot not smaller than the other; had him trotted and ridden on hard road to and fro a dozen times at least; watched the horse's action with the greatest attention, knowing it was a case in dispute, but failed to see any lameness. Had the horse well galloped for one-and-a-half to two miles on field, then put into stable for half-an-hour; brought out and trotted on hard road. He went better than before, and quite sound. He had a little peculiarity in his manner of going, which some might take for lameness, but he was satisfied it was natural action, and not lameness. His examination lasted over one hour. No chronic or recent disease in his feet.—Mr. Taylor, Manchester, Fellow of the Royal College of Veterinary Surgeons, and Member of Council, examined the above horse on the 2nd February. He did not "point;" no alteration of structure; one foot not smaller than the other; a practised eye could see it at a glance. Had him trotted and ridden on hard road; well galloped in field; put into stable half-an-hour; again trotted on hard ground. He trotted better than before he was galloped. This could not be so if there had been any defect in navicular. There was no evidence whatever of chronic disease; no coffin-joint disease; no navicular disease. In his opinion he was slightly lame on off-fore foot, temporary congestion of laminæ from standing, and not having had his feet pared for four months.—Professor Pritchard said he had been a teacher in the Royal Veterinary College seventeen years. He had examined this horse, and found him quite sound in his fore feet; no evidence whatever of any chronic disease: no navicular disease; no coffin-joint disease; if put under proper treatment would be well in a fortnight; at the present moment he is lame on near-fore foot, an injury on seat of splint.—Mr. W. C. Barling examined the said horse; found no evidence whatever of chronic disease in his feet; no coffin-joint disease, or navicular disease, but slight lameness of off-fore foot from temporary cause.—At the conclusion of defendant's case, the Judge asked the jury if they wanted to see the horse, which was in the County Hotel stables, expressing the opinion that they had better judge the case upon the evidence. The jury, however, elected to see the animal, and, on their returning, after the learned counsel had summed up, his Lordship asked them two questions—1st, was defendant employed by plaintiff or Mr. Lutwyche? and 2nd, if by plaintiff, was he guilty of negligence in giving the certificate complained of?—After being absent from court about twenty minutes, the Jury returned, and asked if the verdict of the majority would be taken.—Counsel on both sides said "No;" and the Hon. E. K. W. Coke, foreman, said he was instructed to say that they had found in the affirmative on the first question, but with reference to the second they could come to no agreement.—His Lordship: It is hours too early to say that.—The jury then again retired, and after another hour's deliberation found the defendant was negligent in giving the certificate, but assessed the damages at one farthing.—Mr. Graham applied for costs, and his Lordship, in determining to hold over the question for consideration, unless some arrangement was come to, said there was certain to be a new trial, and added, It is a great pity. It is an abortive trial, to a certainty: and I believe it is partly due to the jury having seen the horse.—Subsequently counsel on both sides applied to the Judge to give them the costs, a question which his Lordship had held over.—The Judge said he could not look at the verdict as anything but a mere compromise, and it seemed to him to be in vain to attempt to

regulate the costs.—Counsel on each side said that if he did not obtain costs a new trial would be asked for, and the Judge then said he would let the matter alone.—Mr. Etherington Smith, on behalf of the defendant, then asked for an order for the detention of the horse by a third party, but his Lordship said he did not think that anything that might happen to the horse would be likely to assist the jury on a future occasion. It would only lead to a fresh difficulty, and it was pretty well agreed the animal was worth £25 now. Defendant could offer that sum for it.—Mr. E. Smith: We have done that; but they won't take it.—The Judge: That will be a strong fact for you on a new trial. I can't interfere; I must leave the matter where it stands. There must be a verdict for plaintiff for one farthing; nothing to be said about costs.

Notes and News.

CATS AND CHOLERA.—In two places in the Deccan, Ahmednuggur in 1882 and Siroor in 1883, at a time when Cholera was prevalent, an extraordinary mortality was noticed among cats. The symptoms in both cases were similar; the animals were seized with sickness, which ended in swelling of the throat, producing asphyxia and death within one or two days after the symptoms first declared themselves. At Ahmednuggur in 1882, about 750 cats died in the first three weeks of July; in June last year 300 cats are reported to have died at Siroor. Mr. Lamb, veterinary surgeon, from a description of the symptoms, pronounced the disease as probably Anthrax. A series of official papers on the subject has been published, and the Government have directed that, in case of any similar epidemic appearing among cats in future, careful observations shall be made with a view to determining the relation of the disease to Cholera. The Siroor epidemic commenced a week after Cholera had broken out, and ceased shortly after the Cholera disappeared.

TRICHINOSIS IN GERMANY.—The recent outbreak of Trichinosis in several villages of the Prussian province of Saxony (says the Berlin correspondent of *The Daily News*) has not failed to attract general attention, a special commission having even been deputed by the French Government to study the epidemic on the spot. Dr. Stammer, a physician residing at the village of Emersleben, in the centre of the infected region, has just published the first detailed accounts in a scientific journal, from which I take the most interesting passages. Emersleben is situated about four miles from the district capital Halberstadt, and numbers about 760 inhabitants. For many years it has been the custom in this neighbourhood to use minced but uncooked pork as food in great quantities, the field labourers especially being accustomed to eat this meat spread on bread for their lunch. This was again the case during the past summer. On the 14th and 15th of September last a large quantity of minced, uncooked pork had been consumed, the entire supply coming from the same butcher, at Emersleben. The first symptoms of the epidemic already appeared among some persons on the same day. The first patients were treated on September 20th, and the last on October 15th. The total number was 257, of whom fifty, or about twenty per cent., died. The greatest number of deaths took place during the fifth and sixth weeks, when ten and eleven succumbed, respectively. The ages of the patients whose cases resulted fatally, ranged from twelve to seventy-six. The sufferers also included

many children, the youngest of whom had not yet completed its second year, but they all escaped with their lives, excepting one boy of twelve. Those persons who had eaten the pork after cooking or frying, suffered for from two to three weeks from stiffness of the limbs and some swelling under the eyes, but none were obliged to keep their beds. All persons, however, who had consumed more than a quarter of a pound of the meat have died. Not one of the remedies employed by the physicians had the slightest effect.

ARAB ANIMAL DOCTORING.—The Arab style of doctoring is rather rough. If a horse or other animal has inflammation, they hobble the legs and throw it upon the ground, after which operation a number of men kick it in the belly until it is relieved by death. . . . . Young dogs, as a cure for distemper, are thrown from the roof of a house to the ground, a height of about ten feet. One night we were sitting at dinner, when we suddenly heard a great noise, and the air was illumined by the blaze of a hut on fire. In the midst of the tumult I heard the unmistakable cries of dogs, and thinking that they were unable to escape from the fire, I ran towards the spot. As I approached, first one and then another dog ran screaming from the flames, until a regular pack of about twenty scorched animals appeared in quick succession, all half mad with fright and fire. I was informed that Hydrophobia was very prevalent in the country, and that the certain preventive from that frightful malady was to make all the dogs of the village pass through the fire. Accordingly, an old hut had been filled with straw, and fired, after which each dog was brought by its owner, and thrown into the flames.—*Baker's Nile Tributaries of Abyssinia.*

PONIES LIVING WITHOUT FOOD FOR TWENTY-FIVE DAYS.—A somewhat remarkable example of the great length of time horses can exist without food was brought to light at a coal pit near Airdrie recently. At one of the pits belonging to the Rawyards Coal Company, a large amount of water had accumulated during three weeks, and owing to one of the "roads" of communication being blocked in consequence of choke damp, no access had been had all that time to the four ponies which were left in the workings. The ponies had no food near them, but they were able to reach the water. On the men getting into the workings the animals were all discovered to be alive. Mr. Brownlee, V. S., Coatbridge, examined the ponies, and found them to be apparently little the worse for their long fast of precisely twenty-five days.

EDINBURGH NEW VETERINARY COLLEGE.—The students attending the classes of the New Veterinary College, Leith Walk, recently presented Professor Williams, Principal of the College, with a clock and an illuminated address. Mr. Haslam presided, and, in making the presentation, he expressed the admiration of the students of Principal Williams's great work —the establishment of the New Veterinary College in the midst of great competition. He also expressed their admiration of his personal character, his perseverance, energy, professional skill, and kindness. They looked upon him as their champion, the defender of the students' rights, and felt grateful to him for having reformed the treatment of respiratory diseases. The clock had been erected in the College yard, and the illuminated address bore that it was presented as a recognition of the enterprise and energy with which Professor Williams had forwarded the interest of the profession, and to show their respect and appreciation of his ability as a teacher. Principal Williams replied in very feeling terms.

BANQUET TO PROFESSOR BOULEY.—On the occasion of the election of M. Bouley, Inspector of the Veterinary Schools of France, to the high position of Vice-President of the Academy of Sciences, a grand banquet was

given in Paris on January 26th. M. Pasteur was president, and a very large number (more than 150) of civil and military veterinary surgeons was present, as well as the staff of the Alfort Veterinary School. The name of Professor Nocard, of that school, was also associated with that of Bouley, as a token of admiration for the part he had taken in the work of the Cholera Commission in Egypt. In every way the banquet appears to have been a success, and the speeches delivered by Pasteur, Bouley, Renault, Saunier, Gayot, Capot, Weber, and others, show the great enthusiasm that prevails among our French colleagues in professional matters, and especially marks their affection, almost veneration, for the distinguished *savant* and teacher whom they had met to honour, and who had been similarly fêted sixteen years ago, on his election as a member of the Academy of Sciences. It has been decided that a medal, commemorative of the event, is to be struck.

Correspondence.

UNSOLEING FOR RINGBONE AND SIDEBONE.

SIR,—In the last number of your journal Mr. Greaves, of Manchester, replied to my letter, published in the previous issue, relating to a case of alleged cruelty, heard at Cheadle, in which he gave evidence for the defence. While desiring not to engage in a controversy with an expert on matters which only veterinarians are competent to discuss, I am constrained to beg your indulgence while I venture to correct a few mistakes made by Mr. Greaves; in doing which I will take care not to invade your professional lines, and endeavour to confine myself to matters that I understand.

Mr. Greaves is good enough to compliment me by saying he is "willing to put the most charitable construction possible" on my motives and objects. No doubt when sitting down to write his letter he intended to give me credit for honesty of purpose. It was a mere slip of his pen when he wrote that my "unblushing contortions" and "exceedingly unfair and untruthful criticism" are "nothing less than an insult and impertinence," and make him wonder at "my audacity and effrontery." If these strong expressions strike the reader as inconsistent with good feeling and good taste, it should be remembered, which I certainly will not overlook, that Mr. Greaves regarded himself as injured by my previous letter. I, at all events, will not retaliate. On the contrary, notwithstanding this discussion, I shall shake Mr. Greaves by the hand when I meet him as heartily as I have done before.

Mr. Walters had performed the painful operation known as tearing off the sole of a horse's foot with pincers, really and professedly to cure Sidebone. The Society was advised by five leading veterinarians that the operation for such purpose was unnecessary, absurd, and cruel. We, therefore, appeared at Cheadle to establish that contention. Mr. Greaves appeared, as we supposed, in opposition to that contention. The newspapers stated this, the magistrates took the same view, and we certainly could take no other. It now appears from a fair reading of Mr. Greaves' letter that he did not go to Cheadle to oppose the Society, nor to justify an operation alleged to be cruel, but to defend "an old and highly-respected brother practitioner." I apologise for not seeing the distinction. If not for purpose stated above, his attendance was irrelevant; in fact, more than irrelevant—if not to show that "unsoleing" cures Sidebone, it was idle. Assuredly, then, his

remarks about giving evidence that unsoleing for Canker is a good remedy are beside the question, seeing that the operation for such a purpose was not contested by the prosecution. Besides, in his evidence, as entered on the minutes of the Court, a copy of which I have obtained from the Clerk, he stated: "I think this operation might be beneficial *for Sidebone* . . . . . I would draw [the sole] *for Sidebone;*" and he added that the horse in question had really been benefited [in the cure of Sidebone] by the operation of unsoleing. Surely, then, it was natural for the newspaper reporters to conclude that he regarded unsoleing as an effectual remedy for Sidebone, as stated in my letter; though he may not have said, and did not say, I now believe, the actual words attributed to him by the reporters, namely, that unsoleing is the "best known and effectual remedy" for Sidebone.

Is it not singular that Mr. Greaves, a scientific man, who had never performed the operation for Sidebone, and who had not come from Manchester to support the contention of the defence, should have let out in cross-examination that he had only "just" ascertained that the operation was a useful one—that is to say, until his arrival in Cheadle he was not aware that unsoleing is really a remedy for Sidebone. He said, "I have *just now* come to this conclusion since I have been in this neighbourhood." And how did he come to that conclusion? Why, "plain, honest, country people, unable to explain how the effects of the operation were produced on scientific principles, who could only bring the 'logic of fact' to bear on it, like the man who was born blind, whom Christ made to see," etc.—these "plain, honest, country people" told him at Cheadle that they had known cases where unsoleing had cured Sidebone; and he believed them! Has it come to this—an ex-president of the Royal College of Veterinary Surgeons learns for the first time how to cure Sidebone from "plain, honest, country people," who have not been trained at the Royal Veterinary College, who know nothing about scientific principles and scientific practice, but only "the logic of fact," as peasants understand fact? Has Mr. Greaves, in his long professional career, never met with plain, honest, country people, who have tortured animals by applying "remedies" for diseases founded on ignorance and superstition? I have had to prosecute a man who persisted in scoring the sides of cows with deep flesh wounds, into which he put saltpetre for the cure of Rinderpest; and this man not only believed the process to be a remedy, but actually made a great many other people believe it, too, by the "logic of fact." Thirty-five years ago I heard "plain, honest, country people" declare that their children, some born blind, others born deaf and dumb, others born idiots, had been entirely cured by the "laying on of hands," by Courteney (mad Tom, of Canterbury), and these plain, honest, country people not only believed these "facts" themselves, but they swore to their truth; and they perilled their own lives in defence of the prophet, when he and his disciples were surrounded by troopers.

Plain, honest, country people do not generally possess logic enough to trace causes to their effects (*a priori*), nor effects to their causes (*a posteriori*)—and this failing is seen sometimes even in persons above the rank of plain, honest, country people. Mr. Greaves's conversion at Cheadle reminds me of a story told in medical annals. A young French student, who had been articled to a London physician, visited a case of Scarlet Fever. The patient appeared to be in a dying condition, and the physician told his wife that she might give him anything that he asked for. The poor woman said, "He craves for nothing but a red herring." The physician replied, "Then in the name of Heaven give it to him." The student made a note. Two days later the patient began to recover, to the astonishment of everybody, and ultimately got well. The student made another note—red herring cures Scarlet Fever. Some years later, when practising in his own country, the

same student attended a woman suffering from the same disease. He at once prescribed a red herring, but unfortunately his patient died, when the student made another note—red herring given to men is a remedy for Scarlet Fever, but it kills when given to women affected with that disease.

This instance of misconception respecting cause and effect is no doubt a fair sample of the "logic of fact" which Mr. Greaves found among the plain, honest, country people at Cheadle, who told him that tearing off the soles from their horses' feet had cured the animals of Sidebone. Surely, Mr. Greaves, before endorsing a conclusion of uneducated people, would require proof that the horses referred to had ever suffered from Sidebone! Do such people really know enough about Sidebone to justify a scientist assuming that the premiss of their conclusion is unimpeachable? When I have asked knowing people of this class to tell me the difference between Ringbone, Sidebone, and Roundbone, instead of provoking a smile, my question has elicited a reply showing the grossest ignorance. They did know their horses were lame, but did they detect the cause correctly? The lameness might have its origin in any of several causes, and the cure might have proceeded from rest or from other cause.

Like myself, Mr. Greaves has advanced much further along the path of life than most men at our age like to acknowledge. He may therefore have forgotten some of the lessons he learnt in his student days. Among Greek studies there is a little story which he will remember, if I remind him of it, in which a wag's practical joke is related for the purpose of teaching young men the folly of jumping to conclusions, or taking things for granted, and the importance of making critical examination of the basis of a conclusion. A youth submitted to an assembly of philosophers the question—"How is it that water taken from a river, and placed in a vessel, increases one-eighth in bulk in the course of twelve hours?" The philosophers set themselves at once to discover the cause, and after deliberation, each in turn proceeded to pronounce his solution of the problem—each, save one, who arose from his seat and said, "Before coming to a conclusion, let us ascertain with certainty that it is true that water does increase in bulk, as stated in the question." Thereupon, the plain, honest, country young man hastily left the assembly, an arch leer on his face signifying plainly enough that his object had been accomplished; and thus ended the discussion. I am no scientist, but if I had been with Mr. Greaves at Cheadle, I think my natural caution would have led me to suggest to him something similar to the action proposed by the solitary Greek philosopher; namely, that before jumping to the conclusion of these plain, honest, country people, it would be wise to ascertain with certainty that they had made a correct diagnosis, even if they were capable of making one.

There are defects in Mr. Greaves' letter which show you, I think, that the data on which he founded his conclusions at the hearing, as well as his conversion already referred to, are scarcely sound enough for a scientist. I have taken the trouble to send three different people to Mr. Perry, in order to obtain correct data before replying on the following points.

Mr. Greaves alleges that the horse in question was brought to the court after having travelled eight miles. The distance over which it walked slowly is three miles.

Mr. Greaves assures your readers that "only one limb was fired." This is incorrect. Mr. Perry, the owner, who must feel himself greatly bored, has three times made the following statement for my information:—

The horse is not sound. I would not sell it for a sound horse. I think it will never be sound again. It is still leather-shod by Walters' orders. Walters is still attending it, and using some strong oils on the Sidebone. Walters fired it on both

fore legs at the same time that he unsoled it. I have never told any person that it was fired only on one leg. How could I say such a thing when there it is plainly to be seen on both legs?

Mr. Greaves alleges that he received a letter (inferentially from the owner, whose name is mentioned in the same sentence), wherein it is stated :—

The horse has been at work ever since the operation, except the month's rest after the operation, and no animal could go on better.

There is evidently some mistake here. Mr. Perry cannot be the author of that statement. He assured me (March 1st) as follows :—

"I have never written a line to Mr. Greaves, nor to any one else, about the horse at any time. Mr. Greaves has never received a letter from me in his life, and I am not aware that any one has written to him concerning the horse."

Mr. Greaves also complains that I stated he told the Bench there could be no doubt the animal would recover in a month or two, and he adds, "I told the Bench nothing of the kind. I said, 'I believed *in time* the horse would go right.'" The magistrates' clerk's copy of his evidence before me contradicts him, and vindicates me. Mr. Greaves's actual words were as follows :—"When it [the sole] has grown, *in a month or so*, the horse would go right."

But taking Mr. Greaves's opinion, now that his prediction has failed, and discarding that which he gave in the witness-box, it would be curious to learn the value of his assurance that the horse would go right "*in time*." What is the meaning of "*in time*"? I think it is now *time* to test this cure for Sidebone. The horse is still lame, although Mr. Walters has been attending it, and having "strong oils rubbed on the sidebone" as an additional remedy, assisted by two other "veterinary gentlemen," who go with him sometimes to assist in making the animal well. The joint operations of firing and unsoleing were performed ten months ago, and it is now *time* to report whether the animal goes "right" or not. Each of the three persons who have recently examined the horse for me, declare it to be still lame, and that during the whole of the time they were inspecting it, the animal stood practically on three legs, easing and lifting the foot which had been unsoled, as horses and human beings invariably do when they feel pain in a limb. Is it not *time* now for the cure to be seen, especially as other remedies besides unsoleing have been applied?—I am, sir, your obedient servant,

R.S.P.C.A., 105, Jermyn Street, S.W. JOHN COLAM, *Secretary*.

SIR,—I am astonished and sorry my friend, Mr. Greaves, thought it necessary to introduce my name into his reply to Mr. Colam, on the subject of tearing off horses' soles for the speedy and certain cure of "Ringbones" and "Sidebones," and especially with reference to the trial, in which, as he truly says, he was "the only veterinary surgeon for the defence."

I am all the more sorry for this introduction, as it was not needed, and also because his statements and misstatements show that his memory is either very defective, or his desire to set himself right is only equalled by his eagerness to prove others to be wrong. He has certainly given his imagination free play, and I am impelled to notice his aberrations, in justice to myself and the two veterinary surgeons who appeared as witnesses for the prosecution. In the first place, allow me to state that, as in another

more recent case of cruelty, I was subpœnaed to give evidence, and I gave my opinion truthfully and fairly, as did my two professional colleagues, who agreed in that opinion.

Mr. Greaves states that I tried to prejudice the magistrates against the defendant in the witness-box and in a lane, where I went with one of them, arm-in-arm, etc., giving him *privately* my version, my idea of the case, "telling a tale of horrible cruelty inflicted in the performance of the operation," etc., etc. Now this is a pure invention on the part of Mr. Greaves, and to prove that it has not a shadow of foundation, I took the trouble to obtain the following evidence :—

Captain Smith, Consall Hall, Consall, the chairman of the Bench before which the case of Walters was heard, states : "Dr. Fleming never walked one inch down the lane, arm-in-arm with myself or with the other magistrate, as alleged by Mr. Greaves; nor did he speak one word privately to either of us, nor did he privately endeavour to influence our minds one way or the other. Dr. Fleming was a stranger to myself and the other magistrate, and to say that he walked arm-in-arm with either of us, is not only an absurdity, but a misrepresentation."

Inspector Leonard, of the S.P.C.A.; says : "When the magistrates went to examine the horse, Dr. Fleming did not walk with either of them, and no private conversation of any kind took place, for Dr. Fleming and the magistrates were surrounded by a crowd which had come to hear the case, as well as by the witnesses."

The other allegations and accusations made by Mr. Greaves with regard to myself are as destitute of foundation as the above, and I take no further notice of them than to remark that I was more opposed to than in favour of a conviction for what was, in my opinion, and that of very many others a cruel operation, and which I hoped would be a check to its performance in the future. The dismissal of the case was not much of a victory for Mr. Greaves, if he will remember what the chairman said ; but that it was dismissed on the evidence of Mr. Greaves, I will not gainsay. He stated that he had performed the operation of unsoleing a great number of times (forty, I think), and in every case with great advantage, and that he would have no hesitation in recommending the operation to his clients for the cure of Sidebones. He also positively stated that the horse operated upon by Mr. Walters would be free from lameness in a month (that was ten months ago, and the horse is now so lame that it cannot be worked on the road); that unsoleing was not a very painful operation, etc. Mr. Greaves states the horse was fired on only one leg ; it was fired on *two*, and most severely on the one the foot of which had been unsoled. The owner of the horse, two days ago, said : "Walters fired in both fore legs. I was there myself and saw it." Mr. Greaves does not attempt to explain why, if unsoleing is a certain cure for Sidebones, the actual cautery was resorted to in this instance, nor what share in the cure he would allow the latter, if the horse had recovered from lameness.

The horse was suffering from sprained flexor tendons close to the fetlock, and the fetlock joint was overshot. Mr. Greaves' eyes, touch, and memory fail him very sadly, I fear.

There was only *one* other horse brought to the court, said to have been unsoled and cured of Ringbone thereby. This horse was not examined, as no credence could be placed in those who brought it. The plain, honest country people in whose statements Mr. Greaves places implicit confidence, swore that horses which were so lame that they could scarcely walk, immediately after the soles were torn off, got up free from lameness, and the Ringbones and Sidebones disappeared in a few days ; also that the tearing off the soles did not produce any indications of pain. I need not quote

Scripture, but in reference to this evidence and what Mr. Greaves saw, there can be no doubt his ready credulity was most severely taxed, or he willingly allowed himself to be deceived. The result has shown that he made a mistake. When at Stoke, I was informed of Mr. Greaves tearing off the sole of a horse there some time ago; the animal, my informant said, screamed and struggled terribly during the operation, and died in a few hours afterwards. If this is a fact, Mr. Greaves did not allude to it at the trial nor in his letter.

My respect for Mr. Greaves forbids my saying more on this subject than that I have had occasion to operate on horses' feet frequently enough—at one time as often as your correspondent, perhaps—but that I never unsoled for Ringbone or Sidebone; that I would not recommend the operation for these conditions; and that I would be justified in not doing so, not only by the evidence of Mr. Greaves and the plain, honest country people he admires, but by the result in this instance. Mr. Greaves was the only veterinary surgeon for the defence in this trial; I have reason to hope and think that he stands alone in the profession (Mr. Walters excepted) with regard to his notions as to the advantages to be derived from tearing off the sole to cure Sidebone. Those members of the profession who were in court when he gave his evidence were as much startled as pained by his statements; and though the decision of the Bench pleased the rabble usually congregated in police-courts, and which on that day was mainly composed of low screw-dealers and other disreputable characters (Mr. Greaves' plain, honest country people, who corroborated his views), yet it and the trial do not reflect much credit on the defendant or his witnesses. It appeared to me that Mr. Greaves' assertions in the witness-box had about as much foundation as those he makes in his letter with regard to myself. We may entertain different opinions now and again on professional matters, but there is no reason why we should not adhere to facts in dealing with each other's sayings and doings.

Yours, etc.,

March 10th. G. FLEMING.

QUALIFICATIONS FOR COUNCILSHIP.

DEAR SIR,—I have just received a circular from Mr. Mulvey asking the suffrages of the profession in order to his election as a member of Council.

His profession of faith seems remarkable, seeing that we live in an age of progress, and that our profession is making an effort to march with the times.

How a candidate could ask the votes of his professional brethren from such a platform is remarkable. Mr. Mulvey appears to desire to lower our professional standard instead of raising it. Away with our "charters on every conceivable question"! Away with our united attempts to bring a better class into the profession! Away with the "farce" of putting those who possess the "higher degree" in any place of legislative influence in the professional councils! Elect Mr. Mulvey as a Councilman, with every other candidate of like opinions, and let us go back to the dark ages of our profession; thus affording another instance to posterity of the levelling tendency of the latter part of the Victorian age. Yours truly,

F.R.C.V.S. (*Exam.*)

THE QUESTION OF SOUNDNESS IN HORSES.

SIR,—Mr. A. G. Ross has offered some remarks in the March number of this Journal in reference to the above question, some of which are easily answered; others require explanation. The great lawyers who have presided at cases, when tried by them in London, have expressed themselves very explicitly. In the first place, Chief Justice Best is reported to have said in the case of Best *v.* Osborne, "It is a difficult matter, without the use of negatives, to explain fully and briefly the meaning of the word 'sound' as applied to horses." His lordship held that "sound" meant "perfect." Mr. Baron Parke follows, in Kiddell *v.* Barnard, that "the word 'sound' means what it expresses, namely, that the animal is *sound* and free from disease at the time he is warranted." And in the same case, Mr. Baron Alderson said, "The word 'sound' means *sound*; and the only qualification of which it is susceptible arises from the purpose for which the warranty is given." Again, Mr. Baron Parke said in another case, "I think the word 'sound' means what it expresses," and repeated almost the exact words before stated. He goes on to say, "If indeed the disease was not of a nature to impede the natural usefulness of the animal for the purpose for which he is used, as, for instance, if a horse had a *slight pimple* on his skin, it would *not* amount to an *unsoundness*, but even if such a thing as a pimple were on some part of the body where it might have that effect, as for instance, on a part which would prevent the putting a saddle or bridle on the animal, it would be different." Further he said, "An argument has, however, been adduced from the slightness of the disease and the facility of cure; but if we once let in considerations of that kind, where are we to draw the line? A horse may have a cold which may be cured in a day; or a fever which may be cured in a week or month; and it would be difficult to say where to stop. Of course, if the disease be *slight*, the *unsoundness* is proportionably so, and so also ought to be the *damages*; and if they were inconsiderable, the judge might still certify under the statute of Elizabeth (j) to deprive the plaintiff of costs. But on the question of law, I think the direction of the judge in this case was perfectly correct, and that this verdict ought not to be disturbed. Were this matter presented to us now for the first time, we might deem it proper to grant a rule, but the matter has been, we think, settled by previous cases; and the opinion which we now express is the result of deliberate consideration." And Mr. Baron Alderson said, "I am of the same opinion." These extracts are taken from Oliphant's work, entitled "The Law of Horses." I think it must be admitted that the judges whose words I have quoted, have clearly defined what *soundness* means, but in practice we find that that definition is not always adhered to. In cases of *warranty* there cannot be any difficulty in answering the question by the words "yes" or "no," simply from the fact that *sound* means *perfect!* How often do we meet with sound or perfect horses? I am of opinion that we seldom examine perfectly sound horses, and, if such be the case, what are we to do? This subject was treated by me in the pages of the *Veterinarian* for nearly five years, commencing in 1863, and articles appeared every month, during that period, up to the time of my old and esteemed friend Merton's death. I found that the question was a large and comprehensive one to deal with, and one that in my opinion, *cannot* be settled by the profession in the face of the decisions of the Law-Lords. If the members of the profession are to be *unanimous*, the "law" must first undergo considerable alteration and amendment. The practice adopted by me for many years in examination as to soundness, is to ascertain defects or disease which may be called patent or visible—facts, in other words—and then bring experience to bear upon the point, and give a certificate accordingly. Examinations, therefore, are divided into two sec-

tions—namely, legal soundness or unsoundness, and practical or useful soundness. It throws a large responsibility upon the examiner, as a matter of course, but I have always found it act satisfactorily. For example, a V. S. is requested to examine a horse as to soundness, and he discovers a splent or node upon some part of the metacarpal bone, and he must decide whether that splent is likely to cause lameness, and prevent the animal performing the work he is intended for, or otherwise. It would be a difficult question for the profession to decide that splent is an unsoundness or *not*, because not only the situation of the bony deposit, but the *magnitude* as well as *shape* must be duly weighed. In a long professional life, I have met with many singular cases, and if they were related it is more than probable that many members of the profession would feel somewhat sceptical as to the truth. The same remarks may be made in reference to exostosis situated upon the "Tarsi." I have purchased horses with large bony deposits, for the purpose of experiment, and have found these exostoses never interfered in any way to cause lameness or any inconvenience; so that such horses, although unsound, were *practically* sound. I think we shall have to be contented with the present state of things, for some time longer, and it behoves practitioners to make themselves as familiar as circumstances will allow, with not only the structure, but the function of parts, when considering the diseases found upon the limbs. I should, however, be glad to read the opinions of members of the profession who may wish to throw light upon this knotty question. With regard to veterinary surgeons not agreeing, it is not surprising, inasmuch as some men are so prejudiced, that if one gives a certificate on soundness, another is certain to reverse it, and *vice versa*. It must be remembered that the profession is composed of many classes of individuals, and all are not alike constituted. And there is an old saying, *and a very true one*, viz., "Prejudice, when it looks it squints, and when it talks it lies."—I am, sir, yours, etc.,

R. H. DYER, M.R.C.V.S.

Limerick, *March 3rd*, 1884.

DEAR SIR,—Surely it is possible to arrive at a better understanding amongst ourselves as to the soundness of horses, so as to prevent so much difference of opinion, which makes us appear ridiculous in courts of law. Doctors differ, but, I think, not so much as veterinary surgeons. The evidence of ordinary or non-professional witnesses frequently varies considerably; but we, as a united body, should have more uniform ideas as to what lameness, etc., really is. Very rapid advances are being made in our profession, and no doubt ultimately improvements will be made in this particular branch. There are, certainly, unavoidable causes, and also accidental matters, which bring about opposite certificates. But practitioners differ very much in their ability in this particular direction. Certain diseases appear suddenly, and sometimes disappear in the same manner—to wit, a slight cough, which may produce temporary whistling; spasmodic Roaring, etc. Different veterinary surgeons have various methods of examination; some themselves ride the horse, others do not; some are *much more particular* in their examinations than others. Injuries may, and sometimes do, occur subsequent to previous surgeon's issue of certificate. The throat-band of the bridle may press upon the larynx and thereby cause temporary noise. Recently a case occurred where a veterinary surgeon passed a certain horse as sound without having taken the precaution of having the saddle removed. The result was that the owner, on the arrival of the horse, found a number of vesicles (Eczema) under

the saddle, which caused the animal to be under treatment for three weeks. At the numerous veterinary medical meetings it would be well if this matter was discussed. If pupils passed a certain time at a good veterinary establishment prior to going to St. Pancras school, it would, methinks, prevent the trouble to a great extent. To examine horses well requires a horse-man, and there would be fewer men in our ranks who are not naturally horsemen if it were a more general rule for them to act as pupils to a veterinary surgeon. Veterinary literature on other matters is in accordance with the spirit of the age, thanks to Fleming, Williams, etc., etc., but we lack a good work on "Veterinary Jurisprudence."—I remain, yours faithfully, "EXCELSIOR."

PARTURIENT APOPLEXY OR MILK FEVER IN COWS.

DEAR SIR,—I have read with much pleasure Mr. J. H. Cox's paper on the above disease, and I must acknowledge that it is a very able one, showing great literary ability and practical utility. But I entirely disagree with Mr. Cox as to the cause of the complaint, which is my only excuse for writing this letter. He states that the disease is due solely to Thrombosis, or blood-clotting.

The clots, he presumes, are taken up from the divided ends of blood-vessels in the uterus (either, he says, of the cotyledons or umbilical vessels; here I cannot understand what Mr. Cox means, for what have the umbilical vessels to do with bloodclotting in the cow?), and become lodged in the brain, producing Apoplexy. Now, blood-clotting may be a cause of Milk Fever, but is scarcely probable, as I shall attempt to prove presently. Mr. Cox brings forward many good reasons mentioned by other authorities as the cause of this disease, but very soon disposes of them in favour of his pet theory, Thrombosis. He mentions the udder being hard, tender, and hot showing that the blood-vessels of the gland are engorged, and yet milk is not produced in sufficient quantity, solely, he says, from defective nerve stimulus, resulting from thrombi. Is it not possible for over-congestion of the mammary gland to be the cause of insufficient secretion of milk? Again, if Mr. Cox's theory be right, how is it, other things being equal, that a poor milker is not so susceptible to the disease as a heavy one? Is it that the uterus of a bad milker is always in its pristine condition of contractile power, and that it is impossible for blood clots to be absorbed from the uterus of such a cow? Mr. Cox also asserts that if the uterus only contracts on itself it is immaterial how many injured cotyledons there may be; absorption of blood clots, will not take place, for the clots are held firmly fixed by the contracted uterus. This is a great stretch of imagination, and contrary to all teaching. Now, thrombi, which may be detached from plugged vessels in the uterus, are most likely to produce embolism in the lungs, and not in the brain; certainly congestion of the lungs does occasionally occur after Milk Fever, but this is a sequel of the disease, and does not arise primarily. Then, again, where we are least likely to have any injury to the cotyledons? when the cow-calves with remarkable ease and the placental membranes have been expelled naturally, how is it if the cow be a heavy milker we are very liable and likely to have the disease set up? Mr. Cox also doubts the possibility of a cow taking Milk Fever before calving, for this might upset his theory. But this is possible, and I have seen it and had to take the calf away while the cow lay on the ground in an insensible condition; she never regained consciousness, and was destroyed twelve hours afterwards, comatose.

Now, if emboli be the cause of this disease, then bleeding from the jugular vein after calving would certainly be the very worst plan to pursue, for you empty the blood-vessels, and thus hasten absorption, to make up for the loss of blood taken. Blood clots or detachments of thrombi would therefore be likely to be drawn into the circulation; but in my practice, instead of causing emboli to be lodged in the brain, bleeding has the opposite effect, and invariably prevents the disease taking place.

My belief is, that the primary cause of the complaint is plethora, due to overfeeding, want of exercise, and the artificial forcing to which dairy-cows are now subjected. This excess of blood in the body at the period of parturition, causes over-congestion of the mammary gland, producing, instead of a free flow of milk, suppression of the lacteal production, the milk being short in quantity. Should this congested state of the udder not become relieved, the sympathetic nervous system becomes deranged, and the excess of blood in the system flies to the brain, producing Apoplexy. The best preventive of Parturient Apoplexy I find to be the abstraction immediately after calving of four quarts of blood from the jugular vein, and give a purgative composed of Magnesium sulphate half pound, and treacle four to seven pounds. Mr. Cox's treatment of the disease I consider good, but think the printer has made a misprint in regard to the quantity of ginger and gentian given by Mr. Cox. He surely never would give a cow a pound weight of each! I also cannot see the utility of injecting the uterus with astringents. Trusting these few disjointed remarks will not be taken amiss by Mr. Cox, for I consider it very essential to find out the cause of the disease, as, if we know not the cause, we cannot hope to be successful in our treatment, I am, sir, yours respectfully,

"VERUM."

PROTECTIVE INOCULATION FOR CONTAGIOUS PLEURO-PNEUMONIA.

SIR,—I think the attention of the profession should be called to the following paragraph which appeared in the *Scotsman*, of March 15th:—

"The Veterinary Inspector to the Aberdeenshire Local Authority submitted to the Board an interesting report on experiments in the inoculation of cattle to prevent the spread of Pleuro-pneumonia. The report stated that twenty-three animals had been operated upon in the month of April last year, and the condition of the cattle was carefully noted in all the stages through which they subsequently passed until they reached the butcher's hands, when it was found that none of them were affected by the disease. It was contended that the system of inoculation would do much to prevent the disease spreading in valuable breeding herds."

As we all know, this fact of *practical* prevention of Pleuro-pneumonia has been worked out and established by Mr. R. Rutherford, of Edinburgh, some years ago. Might not the dignified inspector have condescended to acknowledge the source of his information, and have only honoured the deserving Jenner of the veterinary profession? Ought it not to be, "to whom honour is due, let the honour be"?—Yours obediently,

Manchester. A. J. HASLAM.

SLOUGHING IN RINGWORM.

SIR,—Early last month I attended a bay gelding affected with Ringworm in three places. I treated it with mercurial ointment, two spots got well, but I forward a patch of cuticle which sloughed out of the third. I thought some favourite nostrum might have been used in my absence; but from inquiries instituted I find such could not have been the case. I would be glad of any information as to probable cause, or similar experience from any of your readers. Some other horses I am now attending, I treat with carbolic and glycerine as a burnt child.—Yours, etc., "GUILLIT."

[The piece of cuticle forwarded, looks as if necrosed by the action of arsenic We have never seen ordinary mercurial ointment produce this result.]

PROFESSIONAL ADVERTISING IN IRELAND.

SIR,—Much has been said and written relative to improving the social status of the profession, and no one has done more than yourself towards that object, and for which you deserve the thanks and support of the profession. But while a system of advertising is pursued, where the heads of the profession in this country (Ireland) advertise in the same phraseology as tailors, and a F.R.C.V.S. appears in conjunction with a notice from pig-jobbers, and in a low and seditious print, surely a serious obstacle is thrown in the way of our social and professional advancement. Why cannot a man commence his professional announcement with the prefix "Mr.," the same as the dental surgeon, who is, I presume, neither socially nor intellectually our superior? I hope, sir, you yourself will again refer to this matter. In this country the profession ranks as high, if not higher, than in England or Scotland; but such pernicious habits tend to retard it in every way.—I am, sir, your faithful servant, "AN IRISH PRACTITIONER."

[Our correspondent encloses two cuttings—one from a notoriously disloyal and disreputable Irish newspaper, in which two members of the Royal College have advertisements in the same column with those of a tailor and a pig-salesman; another from a local paper, with the advertisement of a young member, who quotes a testimonial given by one of his teachers. No doubt, the practice of advertising in this fashion is eminently calculated to discredit the profession and keep it down to a low level.]

THE MAYER FUND.

DEAR SIR,—I beg to thank you most sincerely for inserting my appeal to the veterinary profession, as well as for the continued support which you have afforded to its prayer; I desire also to record my grateful thanks to the following contributors whose donations have been received by you and paid into my account at Messrs. Cox and Co., Craig's Court:—J. Roalfe Cox, £10; J. E. Jarvis, £5 5s.; Sir F. Fitzwygram, Bart., £5; Professor Brown, £5; Professor Simonds, £5; Thomas Greaves, £3 3s.; Messrs. G. Balls and Son, £3; Professor Robertson, £3; Messrs. Lepper, £2 2s.; D. Hutchen (Cape), £2 2s.; J. Freeman, £1 1s.; E. Burnside, £1 1s.; S. W. Withers, £1 1s.; H. Paradise, £1 1s.; A. Stainton, 10s. 6d.

My sincere thanks are likewise due to Thos. Gudgin, Esq., and to the undermentioned members of the "Army Veterinary Department," for the following sums which have been handed over to myself:—T. P. Gudgin, £4 4s.; W. B. Walters, £2 2s.; Dr. Fleming, £2 2s.; E. T. Cheeseman, £1 1s.; D. J. Hinge, £1 1s.; W. Appleton, £1 1s.; W. Gladstone, £1 1s.

Yours truly,

T. W. MAYER.

[We beg to draw attention to this appeal of Mr. Mayer, whose case is worthy of consideration by the charitably-disposed members of the profession.]

AMPUTATING HORSES' TAILS.

SIR,—I have received many communications on the subject of my motion on docking, which comes on for discussion at the next meeting of the Council of the Royal College, not only from individual members of the profession, but from various veterinary medical associations, approving of the motion.

There seems to be an impression in some quarters that the motion is irregular, and I shall, therefore, be much obliged if you will allow me space to inform the profession that the notice is in proper form, and will be introduced as announced.

Bye-law 11 is perfectly clear on the point; it runs as follows:—

"Any member of the Council who shall be desirous of introducing any subject for discussion, shall give notice thereof in writing to the chairman at some previous meeting, or to the secretary in time for its announcement in the notice of meeting."

If the Council did not act, or acted contrary to the general feeling of the profession, Bye-law 15 provides a solution of the difficulty. It runs as follows:—

"The President, upon receiving a requisition signed by ten members of the Council, or by twenty members of the College, requiring him to call a Special General Meeting of the members of the college, and stating the object for which such meeting is required, shall call such meeting within twenty-one days after the receipt of such requisition."—I remain, sir, your obedient servant,

Windsor, *March 13th.* HENRY L. SIMPSON.

TWO SIDES TO A QUESTION.

SIR,—The question under discussion is the relationship of the schools to the profession, not whether I am a fool or not. The latter question cannot be properly discussed with an anonymous writer, and, anyhow, is of very little importance. The former question is of great interest, and I venture to ask your indulgence for a statement of what I conceive are the facts.

Twenty years ago the teaching-schools by their influence and activity ruled the profession by always having a majority of their friends on the Council, which was then, as now, the representative governing body. When the profession obtained a majority as opposed to the schools, they found themselves powerless to carry out any reforms, owing to the defective protection given us by our charter. By persuasion, reason, tact, and mutual forbear-

ance, under the presidentship of Sir F. Fitzwygram, an arrangement was formed between the profession and the schools (with the strong public bodies behind them) by which a new and improved charter was obtained. This charter tied the hands of the schools, and would never have been granted if opposed by them and their backers. It was not gained by threats and recrimination, but, in the words of Principal Williams, "by the willing and hearty support of the schools."

Upon the basis so founded has been raised that superstructure of reform which has recently given rise to some diversity of opinion—a superstructure which owes more to Dr. Fleming than to any other single man, but which is the joint work of many. Our reforms have been very rapid. I approve of every one of them, but I cannot overlook the fact that nearly all affect, or did affect, the interests of the schools, upsetting their internal organisations, increasing their work and expenditure, but adding nothing to their material interests. Those who have the care of the schools would be more than human in their generosity did they not claim some credit for their share of our improvements, and worse than fools in their management if they did not object to measures calculated to increase their burdens.

The sum of their misdeeds is that they have assisted the upward progress of the profession at their own expense; that they have successfully prevented a compulsory pupilage, the good of which they deny; and that they have had the temerity to publicly say so.

One question is not yet settled—the Matriculation Examination. Main strength and stupidity will not settle it, but I hope and believe that a little courtesy, a little friendly consideration of other people's difficulties; an exhibition more of the velvet glove than the iron hand will pull us through, as it has done before. The spirit indicated by the statement of "Councilman,' in March, will facilitate matters, viz.:—"We all respect the veterinary professors who have done their duty to the profession, have been loyal to the body corporate, and have not damaged us in public estimation." But the tone assumed by "Councilman" in January can only cause friction and predispose to resistance. He then said:—"The profession owes little, if anything, to the schools, and if it desires to advance, it must itself move and effect reforms; none will come from the schools. The schools are all very well in their place to teach the rudiments of the profession." In this quotation is compressed all the ingratitude and narrowmindedness of which I complain, and it displays the ignorance of the writer. Fancy a man who has no better idea of the work of a veterinary school than its "teaching the rudiments of the profession." What our schools have to do is to *teach the principles of veterinary science*, and it is a great work—something far beyond the conception of your correspondent, who, let us hope, is only a "Councilman," not an examiner.

Your correspondent "Progress" appears to mean well to the profession, and does not decry the schools. He hardly, however, I think, does them justice. Their relation to the profession he puts rather on the same footing as the connubial arrangement implied by the husband's remark to his wife: "What's yours is mine, but what's mine's my own." He says:—"The great question now is, are the schools to govern the profession, or are they only aids to the profession, and is the profession to govern itself?" I venture to say that this question was answered some years since by the new charter, and that now the question is, Why cannot the schools be permitted to govern themselves and the profession itself? Why cannot both work harmoniously? I believe they can, if transactions affecting them both are carried out in a considerate spirit, and by men whose experience and intelligence enable them to grasp both sides of the question. Unfortunately, there is on the Council at least one man who is wanting in the necessary intelli-

gence and good feeling, and, greater misfortune still, whose re-election may possibly be effected by his continuing to conceal his identity. I can only hope that at our next general meeting he will have the courage to repeat in person what he has written behind a *nom-de-plume*.

Yours obediently,
WILLIAM HUNTING.

SCOTLAND AND THE COUNCIL OF THE ROYAL COLLEGE OF VETERINARY SURGEONS.—THE COMING ELECTION.

SIR,—In view of the election in May, perhaps you will kindly allow me space for a few remarks as to these subjects.

Scotland has three veterinary colleges, with about 380 students. Two of these colleges founded by Scotchmen, one by an Englishman or Welshman, members of the profession. Upwards of three hundred practitioners, holders of the R.C.V.S. diploma, and many others—as good men—holders only of the Highland Society's certificate. Almost all these men have been educated at home, very few in England. Scotland has three veterinary medical societies; their last amalgamated meeting was attended by seventy veterinary surgeons, besides students and others.

England has one veterinary college—in the hands of a company, with its directors or governors, very few of them members of the profession; students two hundred and twenty in number. Fifteen hundred members of the R.C.V.S.—a large proportion of them educated in Scotland, and graduates of Scotch colleges. England has at least six or eight veterinary medical societies—no systematic amalgamation, so far as I am aware. The annual general meeting of the Royal College of Veterinary Surgeons last year was attended by about a hundred and fifty—the dinner by seventy members and guests.

Let, sir, any one compare these two pictures or statements, and say is it fair, is it right, that there should be *twenty-eight* of the practitioners of England on the Council and only *two* of those of Scotland? Such is the case. The Principals of the Edinburgh schools are the only men from Scotland at present sitting as members at the Council table, and their term of office expires in May.

Scotch practitioners have been accused of apathy as regards the R.C.V.S. and its Council; very naturally, they see so little of the meetings of either. Last year, however, two of their number were chosen—men who, as regards knowledge of their profession and love for it, have few superiors; every effort was made to secure the return of these men to Council, and the result was—thorough failure. The Scotch practitioners, polling almost every vote of those surrounding them, were left out in the cold; the London and English practitioners, polling only a moiety of those in their vicinity, walked triumphantly into the Council. Scotchmen, when they wake from their apathy, find they are surrounded by three hundred voters, and they fail. London and Lancashire men find a thousand ready to their hand, and they succeed. If any one wishes to prove, that at a general election the tens of England dwarf and outvote the units of Scotland—that a general vote or *plébiscite* favours numbers and populous centres, he has only to turn to the last election, May, 1883. No better argument in favour of a change in the present mode of election need, I think, be sought for.

This year the candidates in the Scotch interest and in that of the colleges are the Principals of the Scottish colleges. Each veterinary college should surely have its own special representative. The Principal of the London school sits on the Council. The Edinburgh Professors retire, but will probably be again elected. The Principal of the Glasgow school has been for a good many years out of office. Why is this? Professor McCall founded

the Glasgow Veterinary College; he has carried it on by his own unaided efforts and energy; there is no better teacher, no better practitioner—Glasgow and its veterinary college surely have a right to ask that its Principal sit on the Council alongside of those of the London and Edinburgh schools. With the Scotch professors the name of Mr. Mulvey, Bishop Auckland, is joined; the men of the northern counties of England wish to return him as their representative, and they surely have a perfect right to do so. The men of the South have representatives and to spare already; surely they will not grudge to their friends in the North a share in the privilege they have so long enjoyed.

"Union is strength;" but there is such a thing as "union" without "absorption," and if thirty-nine of forty annual general meetings held in London and one in Scotland—if twenty-eight out of thirty-one members on the Council, and ten out of eleven members on the Examining Board, is not absorption on the part of our English friends, what is it?

Two or three years ago, many holders of the Highland Society's diploma showed their friendly feeling to the R.C.V.S. by advising the Directors of the Society to discontinue their examinations, and come to an amicable agreement; but, as has often been remarked, they never anticipated this result. If this state of matters continues it will find its own remedy, which may be friendly or the reverse. A friendly solution of the difficulty, which suggests itself to any one taking the trouble of thinking the matter over is:—1. Some better system of representation, more especially as regards Scotland and Ireland, on the Council. The constituency scheme lately presented by the Scottish societies to the Council was simply a means to this end. 2. The appointment of a few more Examiners from Scotland. 3. A sort of Veterinary Minister for Scotland, or a small sub-section of the Council, to hold two or three meetings in the year somewhere North of the Tweed. The six or eight Scotch representatives under the constituency system, with the three professors, would form a nice little committee, or sub-council, to which might safely be left the appointment—or at least nomination—of Scotch Examiners, the transaction of much of the Council business as regards the Scotch schools, and other such matters. This little arrangement would save the members of Council in Scotland many a long journey to London, and simplify and facilitate much of the business of the Council All matters of paramount importance, of course, to be discussed and decided in Council as at present.

Into the discussion of such matters we need not, however, enter, but it is to be hoped, that in the coming election in May, friendly counsels and feelings will prevail; that members of the profession will remember, that the Royal College of Veterinary Surgeons is our national body, and that its Council, to some extent at least, should be a national one—a Council representative of all classes and of all portions of the profession throughout the kingdom; that Scotch and Irish veterinary surgeons, though fewer in number, have just as much right to have their representatives on the Council as their more numerous English neighbours, and that the end and aim of all voting is the best, the fairest, and the most equitable representation and government of our profession.

My presumption may, perhaps, in closing, be excused, if I venture to suggest that it would be a friendly, graceful, and gentlemanly act, to return the Scotch professors and the representative of the northern counties; they are surely entitled to a place at the top of the poll; and if the R.C.V.S. would kindly hold its next annual general meeting, May, 1885, in Scotland, I think, if spared, their Scotch friends could guarantee the members a reception creditable to all parties. Matters are considerably changed in Edinburgh since the last meeting there, four years ago. The gatherings at

the opening of the colleges and the meeting of the societies this winter were very different from that formerly seen, and I see no reason why a meeting of the corporate body in May, 1885, should not outshine these assemblies. One word of warning, however; 10 o'clock on Monday morning is not a suitable hour. Many Scotchmen will not, and others cannot, leave their homes on Sunday evening, and travel by train. Adjourn the meeting to one o'clock on the Tuesday, Wednesday, Thursday, or Friday, and I venture to predict that the assembly will be worthy of the occasion. Apologising for the length of this letter,—I am, sir, yours very truly,

C. CUNNINGHAM.

Slateford, *17th March*, 1884.

Communications, Books, Journals, etc., Received.

COMMUNICATIONS have been received from A. Broad, London; "Verum;" M. Hedley, Dublin; J. Mills, A.V.D., Madras; R. H. Dyer, Limerick; Professor Smith, Ontario; "An Irish Practitioner;" "Medicus;" "A Dog Breeder;" T. Greaves, Manchester; "Excelsior;" H. L. Simpson, Windsor; F. Spencer, Wragby; H. Kidd, Hungerford; G. Fleming, London; A. E. MacGillivray, Banff; W. Broughton, Leeds; A. Bain, Liverpool; W. Hunting, London; A. J. Haslam, Manchester; C. Cunningham, Slateford; "Guillit;" A. W. Hill, London; J. Colam, London; T. H. Lewis, Edinburgh; A. Leather, Liverpool.

BOOKS AND PAMPHLETS: *Brusasco Lorenzo*, Carbonchio Bacteridiano e Setticemia; *Dr. Adolf Strümpell*, Lehrbuch der Speciellen Pathologie und Therapie der inneren Krankheiten; *Dr. Roderick Stintzing*, Ueber Nervendehnung; Bulletin de la Société Centrale de Medecine Vétérinaire; *F. Ram*, Breeding Horses for Use.

JOURNALS, ETC.: *Tidskrift för Veterinär-Medicin och Husdjursskötsel; Deutsche Zeitschrift für Thiermedicin und Vergleichende Pathologie; Supplement to ditto; Wochenschrift für Thierheilkunde und Viehzucht; L'Echo Vétérinaire; Der Hufschmied; Der Thierarzt; Revue Vétérinaire; Recueil de Médecine Vétérinaire; American Veterinary Review; Archives Vétérinaire; Lancet; Repertorium der Thierheilkunde; Medical Times and Gazette; Medical Press and Circular; Live Stock Journal; Practitioner; United States Live Stock Journal; Annales de Médecine Vétérinaire; Edinburgh Medical Journal; Journal de Médecine Vétérinaire et Zootechnie; La Presse Vétérinaire; Clinica Veterinaria; Quarterly Journal of Veteriniary Science in India; American Live Stock Journal.*

NEWSPAPERS: *Scotsman; Darlington and Stockton Times; Irish Times; Hawick Advertiser; Cape Times; Dundee Evening Telegraph; Irish Sportsman; Winnipeg Free Press; Edinburgh Courant; Standard; Portland Daily Press; United Ireland.*

All Communications, Books for Review, Advertisements, etc., should be addressed to the Publishers.

Morbid Specimens should be forwarded to the Brown Institution, Wandsworth Road, London.

Communications must be accompanied by the name of the writer, though not necessarily for publication. Anonymous Letters and Articles cannot be inserted. The Editor does not hold himself identified with the views or opinions expressed by Contributors.

Communications for insertion in the next number should arrive on or before the 15th of the present month.

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